

CONFIDENTIAL

ATTACHMENT I

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

**ATTACHMENT I
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN
(SPCC)**

~~INTERNATIONAL URANIUM CORPORATION~~

DENISON MINES (USA) CORP.

TONY M BULLFROG MINE

**SOUTH HALF OF SECTION 16 AND THE NORTH HALF
OF SECTION 21, TOWNSHIP 35 SOUTH, RANGE 11 EAST,
GARFIELD COUNTY, UTAH 84726**

Original Date of Plan:	September 2006
Date of Last Amendment and P.E. Certification:	November 2006 May 2008



Designated Person Responsible for Spill Prevention:

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CERTIFICATION

I certify that I or my agent have examined the ~~International Uranium Corporation (IUSA)~~ **Denison Mines (USA) Corp. (DUSA)** Tony M underground uranium mine surface facilities; that to the best of my knowledge the information contained in this preliminary spill prevention, control, and countermeasure (SPCC) Plan is true, complete, and accurate; and being familiar with the provisions of 40 CFR 112, attest that this SPCC Plan has been preliminarily prepared in accordance with good engineering practices and applicable industry standards.

~~Christy Woodward~~ **Ryan Jolley**, PE

Printed Name of Registered Engineer

Signature of Registered Engineer and Date

REVIEW DOCUMENTATION AND MANAGEMENT APPROVAL PAGE
REVIEW DOCUMENTATION

In accordance with the U.S. Code of Federal Regulation (CFR) Title 40, Part 112.5(b) – Oil Pollution Prevention, this spill prevention, control, and countermeasure (SPCC) Plan is reviewed and evaluated at least once every 5 years. As a result of this review and evaluation, ~~International Uranium Corporation~~ **Denison Mines (USA) Corp. (DUSA)** will amend the SPCC Plan within 6 months to include more effective prevention and control technology if:

- Such technology will significantly reduce the likelihood of a spill event from the facility, and
- Such technology has been field-proven at the time of review.

Any amendment to the SPCC Plan shall be certified by a Professional Engineer within 6 months after a change in the facility design, construction, operation, or maintenance occurs that materially affects the facility's potential for the discharge of oil into or on the navigable waters of the United States or adjoining shorelines.

Review Date	Signature of Responsible Manager	Amended (Yes or No)? ¹

¹ Amendment necessary and certified by a Registered Professional Engineer per Title 40 CFR Part 112.5(c)

MANAGEMENT APPROVAL

~~International Uranium Corporation~~ **Denison Mines (USA) Corp. (DUSA)** is committed to the prevention of discharges of oil to navigable waters and the environment. We maintain the highest standards for spill prevention, control, and countermeasures through regular review, updating, and implementation of this SPCC plan for the Tony M Mine located in the South Half of Section 16 and the North Half of Section 21, Township 35 South, Range 11 East, Garfield County, Utah 84726.

~~Jim Fisher, General Mine Superintendent, IUSA~~
Danny Flannery, Mine Compliance Technician, DUSA

Printed Name and Title of Responsible Manager

Signature and Date

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PART I - GENERAL INFORMATION

This Spill Prevention, Control, and Countermeasures (SPCC) plan generally conforms to the format provided in Title 40 U.S. Code of Federal Regulation Part 112 (40 CFR 112). A cross reference of the requirements of 40 CFR 112 and this plan is provided in Appendix A.

A. GENERAL

This section provides general information about the facility.

1. **Name**

Tony M Uranium Mine

2. **Type**

This facility is an onshore facility (non-production) that operates as an underground uranium mine ~~by International Uranium Corporation (IUSA).~~

3. **Date of Initial Operation**

April 2007

4. **Location**

South Half of Section 16 and the North Half of Section 21,
Township 35 South, Range 11 East,
Garfield County, Utah 84726

5. **Auxiliary Facility(s)**

None

6. **Name and Address of Operator**

~~International Uranium Corporation IUSA~~ **Denison Mines (USA) Corp. (DUSA)**
1050 17th Street
Denver, Colorado 80202

7. **Facility Contacts:**

<u>Name</u>	<u>Title</u>	<u>Telephone Number</u>
Jim Fisher	General Mine Superintendent, Tony M Mine	(970) 739-6994
Danny Flannery	Mine Compliance Technician, Tony M Mine	(435)-678-2221

A spill notification contact list is provided in Appendix B.

B. SITE DESCRIPTION AND OPERATIONS

1. Facility Location, Layout, and Operations

The Tony M Mine facility is located in Garfield County, Utah on the south half of Section 16 and the north half of Section 21, Township 35 South, Range 11 East, Garfield County, Utah 84726; approximately 2.25 miles east of Utah State Highway 276 (see Figure 1). Plateau Resources was the most recent operator of the Tony M Mine, and developed over 17 miles of underground workings during the early 1980s. The Tony M portals and workings are on state land. The mine shop, change house, and surface buildings were on Bureau of Land Management (BLM) land. Mine operations ceased, and the surface facilities and evaporation pond structure underwent reclamation. ~~USA~~**DUSA** purchased the claims and State Mineral Lease associated with the former Tony M Mine, and had previously acquired the Bullfrog resource located further to the north.

~~As part of its future operations, the facility plans to install~~ **To support mining operations the facility has installed** a 500-gallon above ground storage tank (AST) for unleaded gasoline and ~~one~~ **two** 5,000-gallon ASTs for diesel fuel. In addition, two generators with belly tanks and ~~one additional 5,000-gallon diesel fuel AST will be used at the facility for energy generation.~~ **850-gallon diesel day tanks are used at the facility for energy generation. The facility plans to install an additional generator when power demands exceed the existing generation capacity. Fuel will be supplied to this additional generator by the existing diesel fuel tanks attached to the existing generators. The facility is also planning to purchase a 1,000-gallon used oil tank.** Up to 2,000-gallons of antifreeze and oil products (i.e., motor oil, hydraulic oil, gear oil, and used oil) will be stored at the maintenance shop within the shop floor and used-oil storage area. With the exception of the used oil tank, these products will typically be stored in smaller containers of less than 100 gallons, drums, and small containers. **A 110-gallon diesel AST is connected to a generator that is used to operate pumps and supply electrical needs at remote locations at the facility.** The layout of the facility, including the location of the emergency power generator(s) and ASTs are provided in Figure 2. Photographs of the mine surface facilities area and associated drainages are included as Appendix C.

~~AST #1 will be is a 500-gallon AST for unleaded gasoline containing unleaded gasoline used for fueling the facilities mobile equipment fleet. AST #1 is located within the bulk fuel storage area and is installed on a concrete pad which slopes towards a secondary containment bay. This AST will contain a refueling port (to remain locked except during refueling operations), a vent pipe, and a refueling nozzle on the tank. This tank has not been purchased; however, it is recommended that this tank be a ConVault (or a tank that meets equivalent standards) 500-gallon, double-walled, tank per the specifications.~~ **AST #1 is equipped with a refueling port (which remains locked except during refueling operations), a vent pipe, and a refueling nozzle on the tank. AST #1 is a double-walled AST and has been equipped with a Veeder Root TLS-300 leak detection system. This tank was manufactured by Modern Welding Company and was built per Underwriters Laboratories (UL) 142 standard for double wall design; specifications are included in Appendix D.**

~~ASTs #2 and #3 will be a~~ **are** 5,000-gallon ASTs ~~for~~ **containing** diesel fuel ~~used for fueling the facilities mobile equipment fleet and to supply diesel fuel to the two 1,000 kW generators.~~ **These ASTs should be double-walled, UL Listed with vent piping,**

~~overflow protection, fill ports with drain lines, and interstitial monitoring. Tank #3 will service the generators and will be connected to the generator belly tanks for refueling purposes. It is recommended that these refueling lines have a drain return or are composed of double walled above ground piping. These tanks have not been purchased; however, it is recommended that these tanks be ConVault (or a tank that meets equivalent standards). 5,000 gallon, double walled, tanks per the specifications included in Appendix D.~~ **ASTs #2 and #3 are also located within the bulk fuel storage area and are installed on the same concrete pad which slopes towards a secondary containment bay. ASTs #2 and #3 are equipped with a refueling port (which remains locked except during refueling operations), a vent pipe, and a refueling nozzle on the tank. ASTs #2 and #3 are double-walled ASTs and have been equipped with a Veeder Root TLS-300 leak detection system. These tanks were manufactured by Modern Welding Company and were built per UL 142 standard for double wall design; specifications are included in Appendix D.**

~~ASTs #4, 5, and 6 will most likely be a double-walled 850 gallon Cummins diesel fuel tank located beneath the three 440 kW generators. These tank and generator sets have not been purchased; however, Tetra Tech recommends that a series of three Cummins 440 kW generator sets with 850 gallon belly tanks for each generator be purchased. This tank information will be finalized with the final SPCC plan. Specifications for these tanks are included in Appendix D.~~ **ASTs #4 and #5 are double-walled 850-gallon diesel fuel day tanks located directly behind the generator station on a concrete pad. The concrete pad has 12" tall walls built around the pad that provide secondary containment. ASTs #4 and #5 are equipped with a normal and emergency vent pipe. These tanks are designed to maintain a supply of fuel through the use of a locally mounted pump, motor and internal float switches to the two 1,000 kW Cummins Generators. These tanks were manufactured by Engine and Compressor Accessories and were built per UL 142 standard for double wall design; specifications are included in Appendix D.**

~~Three generators in series allow the mine operator to stage the purchase of these tanks as necessary for mine operations. It is likely that the first 440 kW generator will be purchased initially to start mine operations and the remaining 440 kW generators will be added later as the mine becomes fully operational. The facility plans to purchase a third 1,000kW Cummins Generator which will also be connected to ASTs #4 and #5.~~

~~Diesel fuel consumption at the facility will depend on the mine vehicle refueling associated with mine production, and the generator operation. It is assumed that the first 440 kW generator will operate 8 hours per day, 4 days per week. The two additional 440 kW generators are assumed to operate 8 hours per day at 250 days per year once the mine is fully operational. The maximum power fuel usage per generator is 30.4 gallons per hour and a 75 percent power fuel usage per generator is 23.7 gallons per hour. Therefore, maximum annual diesel fuel consumption is projected to be 266,304 gallons per year based on an 8760 hour yearly run time. The minimum annual diesel fuel consumption is projected to be approximately 207,612 gallons per year with the same estimated yearly run time.~~ **AST #6 has not yet been installed at the facility but will likely be a 1,000-gallon AST for used oil. This AST will contain a vent pipe, overflow alarm, supply and return lines and a refueling nozzle on the tank. The used oil tank will be located on a concrete pad along the outside wall of the shop. The pad will be equipped with a low wall or curbing that is designed to contain the entire contents of the tank if a leak occurs. This tank has not been purchased; however, it is recommended that this tank be a ConVault or Modern Welding Company (or a tank that meets**

equivalent standards) 1,000 gallon, double walled, tank per the specifications included in Appendix D.

~~AST #7 will be a 1,000-gallon AST for used oil gasoline. This AST will contain a vent pipe, overflow alarm, supply and return lines and a refueling nozzle on the tank. The used oil tank will be located on a concrete pad along the outside wall of the shop. The pad will be equipped with a low wall or curbing that is designed to contain the entire contents of the tank if a leak occurs. This tank has not been purchased; however, it is recommended that this tank be a ConVault (or a tank that meets equivalent standards) 1,000-gallon, double walled, tank per the specifications included in Appendix D.~~ **AST #7 is a 110 gallon tank that travels with the 230 kW generator on the facility that was purchased in July 2005. Based on a field inspection, it appears that this tank is double walled. AST #7 is equipped with ventilation piping and is UL 142 listed and NFPA 37 compliant. Specifications for similar Cummins tank systems are included in Appendix D. This generator is hauled around the surface mine facilities to operate pumps and supply other electrical needs to remote locations. It is recommended that small portable spill kits be carried with the generator when it is transported and when it is in operations at remote locations. It is also recommended that this AST is housed within a covered structure with a concrete floor when not in use.**

~~AST #8 is a 110-gallon tank that will travel with the existing 230-kW generator on the facility. According to Mr. Jim Fisher, General Mine Superintendent, this generator and tank set is a Cummins that was purchased in July of 2005. Based on this information, it is likely that this tank is double walled with ventilation piping and is UL 142 listed and NFPA 37 compliant. Specifications for Cummins tank systems are included in Appendix D. It is likely that this generator will be hauled around the surface mine facilities to operate pumps and supply other electrical needs to remote locations. This is an existing tank, and it is recommended that small portable spill kits be carried with the generator when it is transported and when it is in operations at remote locations.~~

~~The fuel station containment area will be surrounded with soil berms and covered with a thick plastic liner to contain any fuel spills or leaks. The plastic liner will be covered with a protective layer of soil and gravel. The berms will be established at the height necessary to contain the total volume of the largest tank within the containment area plus an additional ten percent. The fueling areas will be sloped so that any spills during equipment fueling or fuel delivery to the site will flow into the containment area.~~ **ASTs #1, #2, and #3 are located in the bulk fuel storage area. The bulk fuel storage area consists of a 25'x35' concrete pad that supports the storage tanks. The concrete pad slopes towards a concrete secondary containment reservoir that was constructed to contain an 8,200-gallon fuel spill. The containment reservoir also serves as a landing on which fuel delivery vehicles park when filling AST #1, #2, and #3. Mine vehicles also park within the containment reservoir when fueling.**

~~Antifreeze and oil products (i.e., motor oil, hydraulic oil, gear oil, and used oil) will be~~ **are** ~~stored at the maintenance shop within the shop floor and used-oil storage area. With the exception of the used oil tank, these products are stored in smaller tanks of less than 100 gallons, drums, and small containers.~~ **drums and small containers that are less than 55 gallons in capacity; on spill containment pallets.** ~~Any spills in the shop area will be contained within the shop walls and the sand trap that is between the shop drain and septic system. will be collected in the waste water treatment system and oil water separator. No water will be discharged from the shop area. Any unused recycled water will be disposed of in propane fired water evaporator. A vendor will~~

periodically pump the used oil tank contents into a tanker truck, which will transport the oil to a recycling facility.

2. Facility Storage

A description of the facility storage tanks is presented below and summarized in Table 1. Specifications of the recommended tanks and appurtenances are provided in Appendix D.

AST #1: ~~AST #1 should be a double walled, 500-gallon AST containing unleaded gasoline. The AST should be rectangular and horizontally situated. The primary tank should consist of welded steel plate construction that is compatible with the unleaded fuel held in the tank. The preferred AST is a steel tank wrapped with Styrofoam insulation (1/4-inch thick) and an impervious barrier of 30 mils (30 thousandths of one inch) high density polyethylene (HDPE) membrane. Leak detection is provided between the secondary containment (HDPE membrane) and the steel tank. The tank should comply~~ **is a 500-gallon double-walled AST containing unleaded gasoline. The AST is spherical and horizontally situated. The primary tank consists of welded steel plate construction that is compatible with unleaded gasoline. Leak detection is provided between the secondary containment (shell) and the steel tank. A Veeder Root TLS-300 leak detection system monitors the interstitial space between the shell and steel tank for the presence of liquids. Should liquids be detected in the interstitial space by the Veeder Root system, an audible and visual alarm will sound in the instrumentation building which is located within the fenced bulk fuel storage area. AST #1 was manufactured in compliance** with Underwriter Laboratories (UL) specifications 142 for above ground fuel storage for flammable and combustible liquids (UL 2002), UL 2085 standard as a fire resistant/insulated and protected tank (UL 1997), and Steel Tank Institute Standard F921 for double-wall aboveground storage tanks (STI 2003).

ASTs #2 and #3: ~~ASTs #2 and #3 should be double walled~~ **are** 5,000-gallon **double-walled** ASTs containing diesel fuel. The ASTs ~~should be rectangular~~ **are spherical** and horizontally situated. The primary tanks consist of welded steel plate construction that is compatible with the diesel fuel held in the tank. ~~The preferred ASTs are steel tanks wrapped with Styrofoam insulation (1/4-inch thick) and an impervious barrier of 30 mils (30 thousandths of one inch) high density polyethylene (HDPE) membrane. Leak detection is provided between the secondary containment (HDPE membrane shell) and the steel tank. The tanks should comply~~ **A Veeder Root TLS-300 leak detection system monitors the interstitial space between the shell and steel tank for the presence of liquids. Should liquids be detected in the interstitial space by the Veeder Root system an audible and visual alarm will sound in the instrumentation building which is located within the fenced bulk fuel storage area. ASTs #2 and #3 were manufactured in compliance** with UL specifications 142 for above ground fuel storage for flammable and combustible liquids (UL 2002), UL 2085 standard as a fire resistant/insulated and protected tank (UL 1997), and Steel Tank Institute Standard F921 for double-wall aboveground storage tanks (STI 2003).

ASTs #4, #5, and #6 and #5: ~~ASTs #4 and #5, #5, and #6 will most likely be~~ **are** double-walled, 850 gallon ~~wall base mounted~~ diesel fuel tanks for the proposed 440 **two 1,000** kW Cummins generators. The ASTs ~~should be~~ **are** rectangular and horizontally situated parallel to each other. The primary tanks ~~should~~ consist of welded **heavy gauge** steel plate construction that is compatible with the diesel fuel held in the tank. The ~~outer or secondary tank will likely be~~ **is also** constructed of **7-heavy gauge** steel that would contain 100 percent of a leak from the inner tank. Leak detection ~~will likely~~ **is**

provided between the secondary containment (~~7 gauge steel outer tank~~ **shell**) and the ~~10 gauge steel inner tank~~. ~~The tanks should~~ **The leak detection system and associated alarms were built into the tank by Engine and Compressor Accessories. The alarms are installed and visible in both the generator building and the instrumentation building. These ASTs are located directly behind the generator station on a concrete pad. The concrete pad has 12" tall walls built around the pad that provide secondary containment. The tanks** comply with UL specifications 142 for above ground fuel storage for flammable and combustible liquids (UL 2002), UL 2085 standard as a fire resistant/insulated and protected tank (UL 1997), and Steel Tank Institute Standard F921 for double-wall aboveground storage tanks (STI 2003).

AST #6: AST #6 is planned as a double-walled, 1,000-gallon AST containing used oil. The AST will likely be rectangular and horizontally situated. The primary tank should consist of welded steel plate construction that is compatible with the used oil held in the tank. Leak detection will be provided between the secondary containment (shell) and the steel tank. A Veeder Root TLS-300 leak detection system should be installed to monitor the interstitial space between the shell and steel tank for the presence of liquids. The tank should comply with UL specifications 142 for above ground fuel storage for flammable and combustible liquids (UL 2002), UL 2085 standard as a fire resistant/insulated and protected tank (UL 1997), and Steel Tank Institute Standard F921 for double-wall aboveground storage tanks (STI 2003).

AST #7: ~~AST # 4 should be 7~~ is a double-walled, ~~1,000~~ **110** gallon AST ~~containing used oil~~ **wall base mounted diesel fuel tank for a 230 kW Caterpillar generator that is transported around the mine surface facilities. The AST should be** is rectangular and horizontally situated **beneath the generator.** ~~The preferred AST is a steel tank wrapped with Styrofoam insulation (1/4 inch thick) and an impervious barrier of 30 mils (30 thousandths of one inch) high density polyethylene (HDPE) membrane. Leak detection is provided between the secondary containment (HDPE membrane) and the steel tank. The tank should comply with Underwriter Laboratories (UL) specifications 142 for above ground fuel storage for flammable and combustible liquids (UL 2002), UL 2085 standard as a fire resistant/insulated and protected tank (UL 1997), and Steel Tank Institute Standard F921 for double wall aboveground storage tanks (STI 2003).~~ **This generator is hauled around the surface mine facilities to operate pumps and supply other electrical needs to remote locations. A portable spill kit is carried with the generator when it is transported and when it is in operations at remote locations. It is recommended that this AST is housed within a covered structure with a concrete floor when not in use.**

~~AST #8 is most likely double -walled, 110 gallon wall base mounted diesel fuel tank for the existing 230 kW Cummins generator that is transported around the mine surface facilities. The AST is rectangular and horizontally situated beneath the generator. The primary tank likely consists of welded 10 gauge steel plate construction that is compatible with the diesel fuel held in the tank. The outer or secondary tank is likely constructed of 7 gauge steel that would contain 100 percent of a leak from the inner tank. Leak detection is likely provided between the secondary containment (7 gauge steel outer tank) and the 10 gauge steel inner tank. The tank likely complies with Underwriter Laboratories (UL) specifications 142 for above ground fuel storage for flammable and combustible liquids (UL 2002), UL 2085 standard as a fire resistant/insulated and protected tank (UL 1997), and Steel Tank Institute Standard F921 for double wall aboveground storage tanks (STI 2003).~~

Tank Appurtenances: ~~ASTs #1, #2, #3, #4, #5, #6, and #8 should be~~ **and #3, are** equipped with ~~audible alarm systems that will sound if a leak occurs. All tanks should have the following appurtenances: normal vent piping, inner tank emergency vents, outer containment area vents, supply and return fuel lines, low level fuel switches, lockable fuel filling ports, direct reading mechanical fuel gages, and fuel in basin switches. The venting systems for the tanks should conform to fire codes and UL Standards for venting.~~ **a Veeder Root TLS-300 leak detection system. The Veeder Root TLS-300 leak detection system monitors the interstitial space between the shell and steel tank for the presence of liquids. Should liquids be detected in the interstitial space by the Veeder Root system an audible and visual alarm will sound in the instrumentation building. Leak detection is provided between the secondary containment (shell) and the steel tanks on ASTs #4 and #5. It is recommended that a Veeder Root system be installed on AST #6 once it is purchased and installed at the facility. ASTs #1, #2, #3, #4, and #5 are also equipped with following appurtenances: normal vent piping, inner tank emergency vents, outer containment area vents, supply and return fuel lines, low level fuel switches, lockable fuel filling ports, direct reading mechanical fuel gages, and fuel in basin switches. The venting systems for the tanks should conform to fire codes and UL Standards for venting.**

~~AST #7 will likely be a single walled tank situated on a concrete pad north of the vehicle maintenance shop. A concrete wall will likely be constructed around the tank to provide 100 percent secondary containment for the tank.~~ **AST #6 should be equipped with the same tank appurtenances as ASTs #1, #2, #3, #4, and #5.**

Fuel Transfer: ~~Diesel fuel transfer from AST #3 to ASTs #4, #5, and #6 (generator belly tanks) should be performed using an enclosed packaged pump set located on the exterior tank wall. This pump set system controls flow between AST #3 to ASTs #4, #5, and #6 and prevents overfilling of ASTs #4, #5, and #6 during fueling operations for AST #3. A digital level indicator should be located adjacent to the pump set. Measured fuel levels should be linked to the pumps leak detection and alarm system to alert facility personnel of critical high and critical low fluid levels. A manual level probe should also be located on AST #1, #2 and #3 to indicate the tank fuel levels (from empty to full). AST #1, #2, and #3 should also be equipped with an immersion heater to maintain fuel viscosity. Temperature monitoring output should be located adjacent to the pump set.~~ **ASTs #1, #2, and #3 are located in the bulk fuel storage area. The bulk fuel storage area consists of a 25'x35' concrete pad that supports the storage tanks. The concrete pad slopes towards a concrete secondary containment reservoir that was constructed to contain an 8,200 gallons fuel spill. The containment reservoir also serves as a landing on which fuel delivery vehicles park when filling AST #1, #2, and #3. Mine vehicles also park within the containment reservoir when fueling.**

Diesel fuel transfer from AST #3 to ASTs #4 and #5 (generator day tanks) is performed using an enclosed packaged pump set located on the exterior tank wall. This pump set system controls flow between AST #3 and ASTs #4 & #5 and prevents overfilling of ASTs #4 and #5 during fueling operations for AST #3. A digital level indicator is located adjacent to the pump set. Measured fuel levels are linked to the pumps leak detection and alarm system to alert facility personnel of critical high and critical low fluid levels. A manual level probe is also located on AST #1, #2 and #3 to indicate the tank fuel levels (from empty to full). AST #1, #2, and #3 are equipped with an immersion heater to maintain fuel viscosity. Temperature monitoring output is located adjacent to the pump set.

ASTs #7 and #8 are refilled via the electrical pump on AST #3.

Piping: The exterior pipe fuel supply and return lines that exit all of the ASTs ~~should be~~ **are** double-walled.

3. Drainage Pathways and Distance to Navigable Waters

Unleaded fuel released from AST #1 and diesel fuel released from AST #2, #3, #4, #5, and #6 **and #5**, would flow into the ASTs secondary containment, ~~then onto the gravel ground surface that covers a plastic liner beneath the tanks. An earthen berm will surround the tanks to provide additional surface containment of any oil spills.~~ **Any flow that escapes the secondary containment of ASTs #1, #2, and #3 would then flow into the concrete containment reservoir incorporated into the bulk fuel storage area. Any flow that escapes the secondary containment of ASTs #4 and #5 would be contained in the reservoir built into the concrete pad that the ASTs are placed on.** Should the oil fuel spill overcome the secondary containment and the **concrete containment reservoirs**, oil-fuel would flow south ~~over the waste rock~~ **east into a temporary diversion ditch located approximately 100 feet east of the refueling area.** Ultimately ~~the oil would reach a temporary diversion ditch located approximately 350 feet southeast of the refueling area.~~ This temporary diversion ditch flows to the south into a temporary sediment basin and ultimately discharges into a tributary of the Shitamaring Creek, located approximately 1,000 feet south (and adjacent to the east) of the mine workings area. Shitamaring Creek ultimately discharges to Hansen Creek, which discharges to the ~~San Juan~~ **Colorado** River, and ultimately to Lake Powell which is approximately 15 miles south of the mine site.

Used oil from AST ~~#7~~ **#6** would spill into secondary containment on the tank, and then would likely be contained in a curbed area around the tank. This tank will be located on the ~~east~~ **north** side of the ~~mine~~ **shop**. Should a leak pass through the secondary containment and ~~then through the earthen berm,~~ **not be captured in the wastewater treatment/oil separator** the discharge would ultimately reach Shitamaring Creek, located adjacent to the surface mine facility.

A spill from AST **#7 or #8** could occur anywhere near the vent holes that surround the mine workings. ~~This tank~~ **AST #7** likely has secondary containment to prevent these spills from occurring; however, should a spill occur, 110 gallons of oil may reach the ground surface. ~~This is an existing tank, and it is recommended that small portable spill kits be carried with the generator when it is transported and when it is operating at remote locations.~~ **reaching the ground surface. A portable spill kit will be carried with the generator when it is transported and when it is operating at remote locations.**

4. Spill History

~~The mine facility has not been constructed as of the date of this report.~~ Prior to IDUSAs ownership of the mine, Plateau Resources operated the facility; however no tank information or spill information has been provided. No visual observation of past spill areas were observed during site visits conducted by Tetra Tech in July of 2006 **and Ryan Jolley of Jones and Demille in April 2008.**

5. Spill Potential, Volumes, and Rates

The most probable causes for spills from ASTs, #1, #2, #3, #4, #5, #6, #7, and #8 are overfilling, a ruptured hose during fueling, or failure of the fuel supply and return lines from the tanks to the generators. Spills caused by loss of structural integrity, vehicle collisions, or earthquakes are low probability events for these tanks.

Table 2 summarizes the potential types of failure, potential spill volume, estimated rate, and direction of spill flow from the tanks.

PART II - DESIGN COMPONENTS AND OPERATIONAL PROCEDURES FOR SPILL PREVENTION AND CONTROL

This section discusses spill prevention and control measures.

A. SPILL PREVENTION

This section describes design components and operating procedures implemented at the facility to prevent oil spills.

1. Bulk Storage Tank and Facility Transfer Operations

Tank Truck Unloading Operations

AST #1, #2, and #3 will be refueled directly from a tank truck from a local commercial supplier. ASTs #4, #5, #7, and #6 #8 will be refueled from AST #3 and the pump system should prevent overfilling of ASTs #4, #5, and #6#5 during refueling operations at AST #3.

Any release occurring during unloading operations would ~~flow south over the waste rock area.~~ **be collected in the concrete containment reservoir.** ~~Ultimately the water would~~ **If the fuel spill overcomes the containment reservoir the fuel would flow southeast until it** reaches a temporary diversion ditch located approximately ~~350~~**100** feet southeast of the refueling area. This temporary diversion ditch flows to the south into a temporary sediment basin and ultimately discharges into a tributary of the Shitamaring Creek, located approximately 1,000 feet south of (and adjacent to the east of) the mine workings area. It is assumed that a **any** release in the vicinity of the mine facility area would likely leak into the sandy soils at the site. In addition, the temporary sediment basin would slow the release of oil and could be blocked to prevent oil from discharging into Shitamaring Creek once a spill was detected. ~~Therefore, additional secondary containment measures for the tank truck unloading operations, as required under 40 CFR 112.7(h), are not necessary.~~

A licensed independent contractor will be hired to remove the used oil from AST #7**6**. ~~According to Jim Fisher, General Mine Superintendent, AST #8 is typically filled from a small tank that is hauled in the back of a pick up truck.~~

It has been determined from mine operations that the depth to groundwater in the area is approximately ~~400~~**ee** to 500 feet below ground surface. Based on this information, and the nature of existing soils at the mine surface facilities (sandy with shallow bedrock), it is unlikely that a fuel spill from these tanks would come into contact with groundwater and cause contamination.

The following procedure is used before fuel is unloaded. This procedure is documented on the forms found in Appendix E each time the tanks are refilled. Copies of this form should be retained in the mine office for 3 years.

- In the event of a spill that could exit the temporary sediment basin, facility personnel are prepared to block the outfall to the temporary sediment basin using material from the spill kit.
- The audible high-level alarm system is checked to ensure that it is functioning properly.

- A facility representative calculates the available capacity (ullage) of ASTs #1, #2, and #3 by converting the reading on the fuel gauge or from the alarm system to gallons (See Appendix E). This ullage is communicated to the fuel supply contractor and marked in the fueling log.
- The tank truck wheels are blocked.
- Drip pans, plastic tarps, or diesel fuel absorbing pads are spread under all pump hose fittings (if applicable) prior to unloading.
- The facility representative and the delivery driver ensure that the fill nozzle is connected to the correct tank appurtenance.
- Spill equipment is maintained inside a shelter or building near the tanks. Equipment generally includes a drum spill kit and an oil-absorbing boom.
- Both the facility representative and the delivery driver remain with the vehicle at all times during unloading. Gauges on the tank and the truck are continuously monitored to ensure the ullage is not exceeded. If the audible high-level alarm sounds, the flow of fuel is stopped as soon as possible.

After fuel unloading is completed:

- The amount of fuel transferred to the tank is recorded in the log (Appendix E).
- The fill hose is drained and then all drain valves are closed (if applicable) before they are removed from the tank.
- Any fuel in the drip pans, on the plastic tarp, or in the spill container on the fill pipe is poured into the tank (if it has the capacity) or disposed of appropriately.
- The tank truck is inspected before the blocks are removed to ensure the lines have been disconnected from the tank.
- The blocks are removed from truck wheels.
- A copy of the fuel-unloading checklist is included in Appendix E.

2. Inspections and Records

Inspection and Maintenance of Tanks:

AST #1, #2, #3, #4, #5, #6, and #7, **and #8** should be visually inspected monthly for any oil outside the tank, especially at seams, joints, and piping. The monitor and alarm system should also be inspected on a monthly basis. In addition to the monthly visual inspections, tank integrity testing, such as hydrostatic, radiographic, ultrasonic, acoustic emission, or another system of non-destructive shell testing, will be performed every 10 years, beginning from the date of installation, or when material repairs are preformed, per Steel Tank Institute (STI) Standard SP001-3. Monthly and annual inspections generally follow the checklists provided in Appendix F. Documentation and a schedule for integrity testing are provided in Appendix G. ~~AST #8 should be visually inspected on a weekly basis and documented monthly along with the other visual inspections.~~

In addition to the above mentioned inspection and testing schedule, AST #8 should be visually inspected on a weekly basis since this AST is single-walled with no secondary containment measures.

Record Keeping: The ullage logs and documentation of fuel unloading procedures are maintained by the person responsible for spill prevention. These records, as well as records of all inspections, will be maintained for at least 3 years from the time of inspection.

3. Site Security

The site is staffed during regular working hours at least 4 to 5 days per week. Signage around the ASTs should identify the contents of the tanks, warn of the presence of a combustible liquid, and indicate that smoking is not permitted near the tank. Pipe bollards were installed within the bulk fuel storage area to protect the tanks from vehicular damage. **ASTs #4 and #5 are located behind the generator station and the site is inaccessible to vehicles.** A gate will be provided to prevent open access to the **bulk fueling station-storage area.** Locks ~~should be~~ **are** provided on all of the fuel ports and generators during non-operational hours at the mine facility. The locks ~~should be~~ **are** capable of preventing access to the fuel in the tanks. **ASTs #7 and #8 should be kept in a covered structure with a concrete floor while not in use.** Adequate exterior lighting ~~will be~~ **is** provided on the equipment at the mine site. Appropriate hazard placards ~~should be placed~~ **are posted** near the ASTs.

4. Training

The Facility Response Coordinator (responsible for spill prevention at the facility) and an on-site alternate are trained in oil spill regulations and how to implement the inspection and maintenance procedures described in this plan. Spill control and countermeasures are also included in the training. An outline for a typical training exercise is found in Appendix H.

Training will be conducted annually. All new personnel responsible for implementing this SPCC plan will be properly trained before beginning the new position. A record of who was trained, when, and by whom will be filed with this SPCC plan and retained for 3 years at a centralized **IDUSA** location.

B. SPILL CONTROL

This section describes control measures installed to prevent any spilled oil from entering navigable waters or adjoining shorelines.

1. Secondary Containment Designs, Construction Material, and Volume

The interstitial monitoring system in ASTs #1, #2, #3, #4, **and #5, #6, and #7** should be able to detect fuel in interstitial space between the primary and outer tank. The tanks have a shut-off liquid flow that is activated when the tanks are 95% full, an audible high-level alarm set at 90 percent capacity, a low fuel alarm, and a critical low fuel alarm. ~~An earthen berm or concrete curb will be placed around the tanks and generators~~ **Concrete containment reservoirs were constructed to capture spills from each tank** to provide additional spill protection.

AST #6 has not been purchased or installed, but should be designed to meet the same requirements and standards for secondary containment as ASTs #1, #2, #3, #4, and #5.

Antifreeze and oil products (i.e., motor oil, hydraulic oil, gear oil, and used oil) are stored at the maintenance shop within the shop floor and used-oil storage area. With the exception of the used oil tank, these products are stored in drums and small containers that are less than 55 gallons in capacity; on spill containment pallets. Any spills in the shop area will be contained within the shop walls and will be collected in the waste water treatment system and oil water separator. No water will be discharged from the shop area. Any unused recycled water will be disposed of in propane fired water evaporator. A vendor will periodically pump the used oil tank contents into a tanker truck, which will transport the oil to a recycling facility.

EPA has issued guidance (OSWER Directive 9360.8-38) on the use of alternative secondary containment measures at facilities regulated under 40 CFR Part 112.7(c, h). The guidance specifies that double-walled tanks should be shop-fabricated, UL tested, and contain generally less than 12,000 gallons capacity. The guidance also allows for technical spill and leak prevention measures, continuous monitoring of product transfers, and adequate spill response to be used as appropriate secondary containment measures. This facility meets these appropriate specifications and necessary methods and procedures for secondary containment.

2. Spill Kits: Type and Location

The facility ~~will be~~ **is** equipped with petroleum spill kits located ~~inside a building or shelter~~ **at the temporary maintenance shop** in the vicinity of the tanks. The spill kits ~~will generally~~ include diesel-absorbent booms, socks, and mats, safety gloves and glasses, urethane spill barriers, and loose absorbent material all contained within a polyethylene drum that also serves as a disposal container.

PART III - SPILL COUNTERMEASURES AND REPORTING

The primary emphasis of this SPCC plan is on prevention. The spill countermeasures presented do not constitute a contingency plan detailed in Title 40 Code of Federal Regulations (CFR) Part 109, nor is one required. Such a plan is required under Title 40 CFR 112.7(d) only if it is impracticable to provide containment, diversionary structures, or equipment to prevent the discharge of oil to navigable waters. In addition, this facility is not required to have a facility response plan under Title 40 CFR Part 112.20 since it does not:

- Transfer oil over water from vessels and have a total oil storage capacity of greater than or equal to 42,000 gallons, or
- Have a total storage capacity that exceeds 1 million gallons.

A signed certification of the applicability of the substantial harm criteria is provided in this plan (see Appendix I). Should a spill occur, the countermeasures discussed in the following sections would be implemented.

A. SPILL COUNTERMEASURES

This section presents countermeasures to contain, clean up, and mitigate the effects of an oil spill that affects navigable waters or adjacent shorelines.

A spill containment and cleanup activity will never take precedence over the safety of personnel. No countermeasures will be undertaken until conditions are safe for workers. The following general procedures should be implemented as countermeasures:

- Account for all personnel and ensure their safety.
- Eliminate all ignition sources in the immediate area.
- Attempt to seal or somehow stop the leak, if it can be done safely.
- Block the outfall from the temporary sediment basin with the diesel fuel absorbing booms or socks.
- Attempt to divert flow away from the temporary ditch with a spill barrier or the spill kit.
- Notify contacts listed in Appendix B.
- Notify emergency response contractor, as described in the next section, for assistance in control and cleanup, if applicable.

B. SPILL REPORTING

This section discusses the reporting procedures for spills of diesel fuel at the facility. The personnel and organizations that are notified vary based on the quantity and frequency of the spill and whether it reaches navigable waters or adjoining shorelines. A spill notification contact list is provided in Appendix B.

A spill event is defined as a discharge of a reportable quantity of oil that violates applicable water quality standards, causes sheen on the water, or causes a sludge or emission to be deposited beneath the surface of the water or upon adjoining shorelines. A spill is further defined as 25 gallons or more, per *The Basic Information for Handling Hazardous Wastes*, Utah Department of Environmental Quality (UDEQ), Division of Solid and Hazardous Waste, or 42 gallons or more in two discharges within a 12 month period, per EPA directive (40 CFR Part 112.4(a)), that escapes secondary containment.

A spill report form that requests the information to be reported to all agencies in written form (to the extent known) is included in Appendix J. The completed form should be sent to Harold Roberts, IDUSA Project Manager, (see next section) who will then distribute the report to any regulatory agencies.

1. General Procedures for All Spills

The Facility Response Coordinator or designee is directly charged with reporting all oil spills that result from facility operations as follows:

- Secure the area to protect all personnel and public from any immediate danger.
- Attempt to contain the spill with equipment from the appropriate spill kit (if it is safe to do so).
- Call 911, if necessary, to alert Fire Department or other Emergency Services.
- Contact your Manager.
- **IMMEDIATELY contact Harold Roberts at 303-389-4160 and report the situation and status.**
- For clean-up, contact the Primary Emergency Response Contractor, Emerald Services, Jim Munnell 1-888-832-3008.
- Continue to secure area until all danger has been removed.

Remember:

The emergency response contractors are not a replacement for 911 call reporting.

An employee should always call 911 if a spill:

1. Threatens human health or safety; and/or
2. Cannot be controlled, is continuous, spreading, or has reached water.

An employee should use their judgment in calling 911 – **if in doubt, call 911.**

2. Emergency Response Contractors for IDUSA Facility

Primary: Emerald Services, Jim Munnell 1-888-832-3008.

3. Utah Spill Reporting Requirements

A spill is defined as 25 gallons or more per Utah Department of Environmental Quality (UDEQ), Hazardous Waste Division. Any suspected release of an unknown quantity(ies) is a reportable quantity unless it can be shown conclusively that the release was less than the reportable quantity. Spills should be reported to the UDEQ within 24 hours of an event via telephone or facsimile (see Appendix B). The IDUSA Project Manager is responsible for determining if a spill is to be reported to a regulatory agency.

PART IV – CONFORMANCE WITH STATE REQUIREMENTS

This facility is located in the State of Utah and; therefore, the tank is subject to petroleum storage tank regulations summarized in UDEQ's Basic Information for Handling Hazardous Wastes booklet. ~~Tetra Tech contacted the UDEQ's Division of Remediation and Reclamation who regulate Underground Storage Tanks, and UDEQ's Water Quality Division to obtain information regarding Above Ground Storage Tank Regulations. Through a series of phone calls Tetra Tech determined that there are no state specific regulations in Utah for ASTs; however, the Division of Solid and Hazardous Waste provided Tetra Tech with it's handbook titled, *The Basic Information for Handling Hazardous Wastes*, Utah Department of Environmental Quality (UDEQ), Division of Solid and Hazardous Waste. Based on this guidance manual, the following more stringent requirements were identified:~~

1. A reportable spill is defined as 25 gallons or more of petroleum, per UDEQ.

PART V – REFERENCES

National Fire Protection Association (NFPA). NFPA 30, National Fire Protection Association Flammable and Combustible Liquids Code.

Steel Tank Institute (STI). Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids. Standard SP001-3. January.

STI. 2003. Standard for Aboveground Tanks With Integral Secondary Containment. Standard F921. January.

Underwriters Laboratory, Inc. (UL). 1997. Standard for Protected Aboveground Tanks for Flammable and Combustible Liquids. Standard 2085. December, 30.

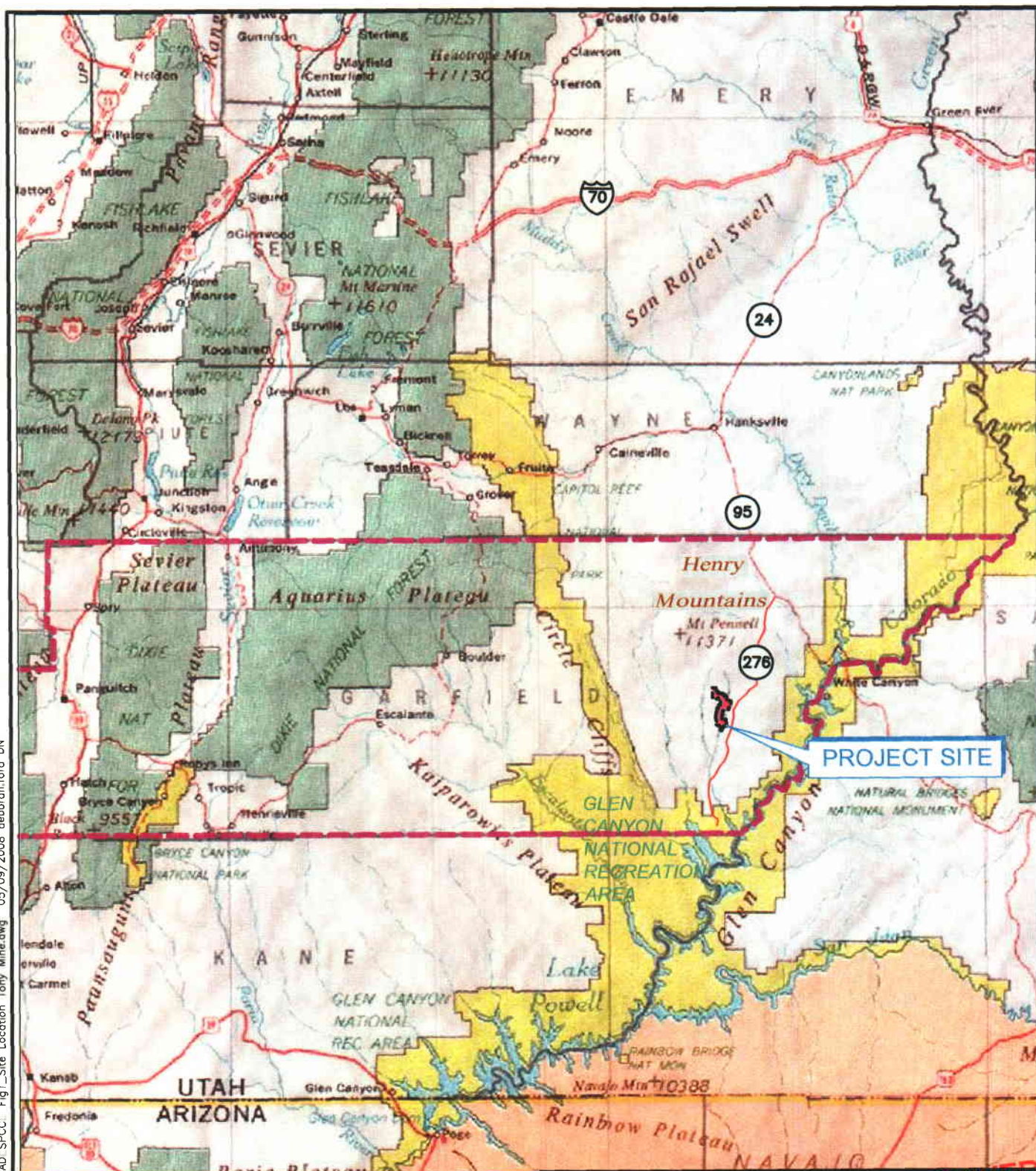
UL. 2002. Steel Aboveground Tanks for Flammable and Combustible Liquids. Standard 142. July 11.

Utah Department of Environmental Quality (UDEQ) Division of Solid and Hazardous Waste. *The Basic Information for Handling Hazardous Wastes.*

U.S. Code of Federal Regulations (CFR). 2002. Title 40, Part 112, Oil Pollution Prevention. July 17.

U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response (OSWER). 1992. Use of Alternative Secondary Containment Measures at Facilities Regulated under the Oil Pollution Regulation (40 CFR Part 12). OSWER Directive 9360.8-38. April 29.

S:\Project DUSA_P4214.004 Tony M Phase 2 CAD SPCC Fig1_Site Location Tony Mine.dwg 05/09/2008 deborah.ford DN



LEGEND



APPROXIMATE SITE BOUNDARY



GARFIELD COUNTY BOUNDARY



SCALE: 1" = 20 MILES



RECEIVED
JUN 06 2008

Project **TONY M. MINE**

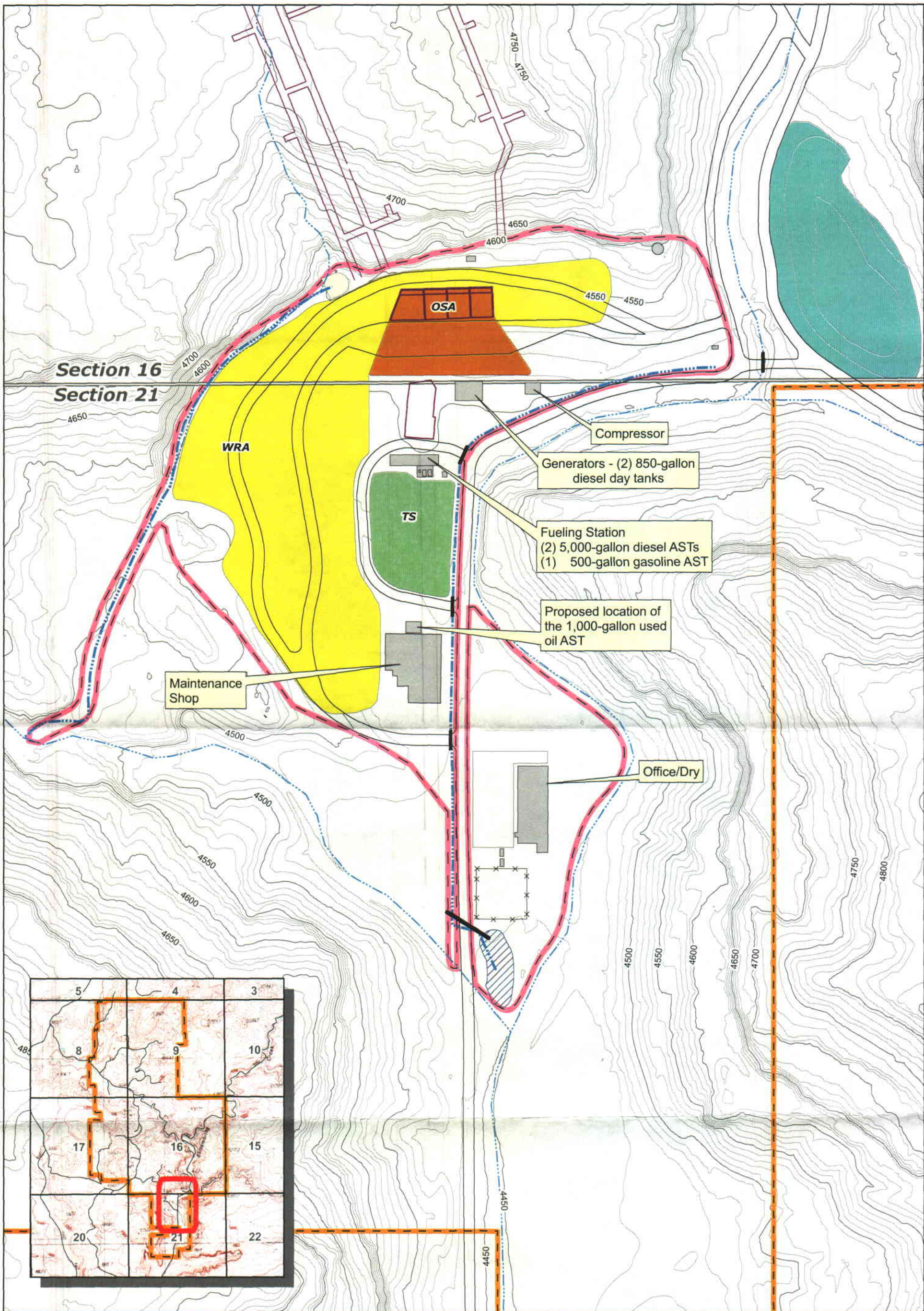
County: Garfield	State: Utah	Location: T 34-35 S, R 11-12 E
DSGN: DMF	DRN: DMF	DATE: 05/09/2008
		REVISION:

FIGURE 1
SPCC PROJECT LOCATION MAP

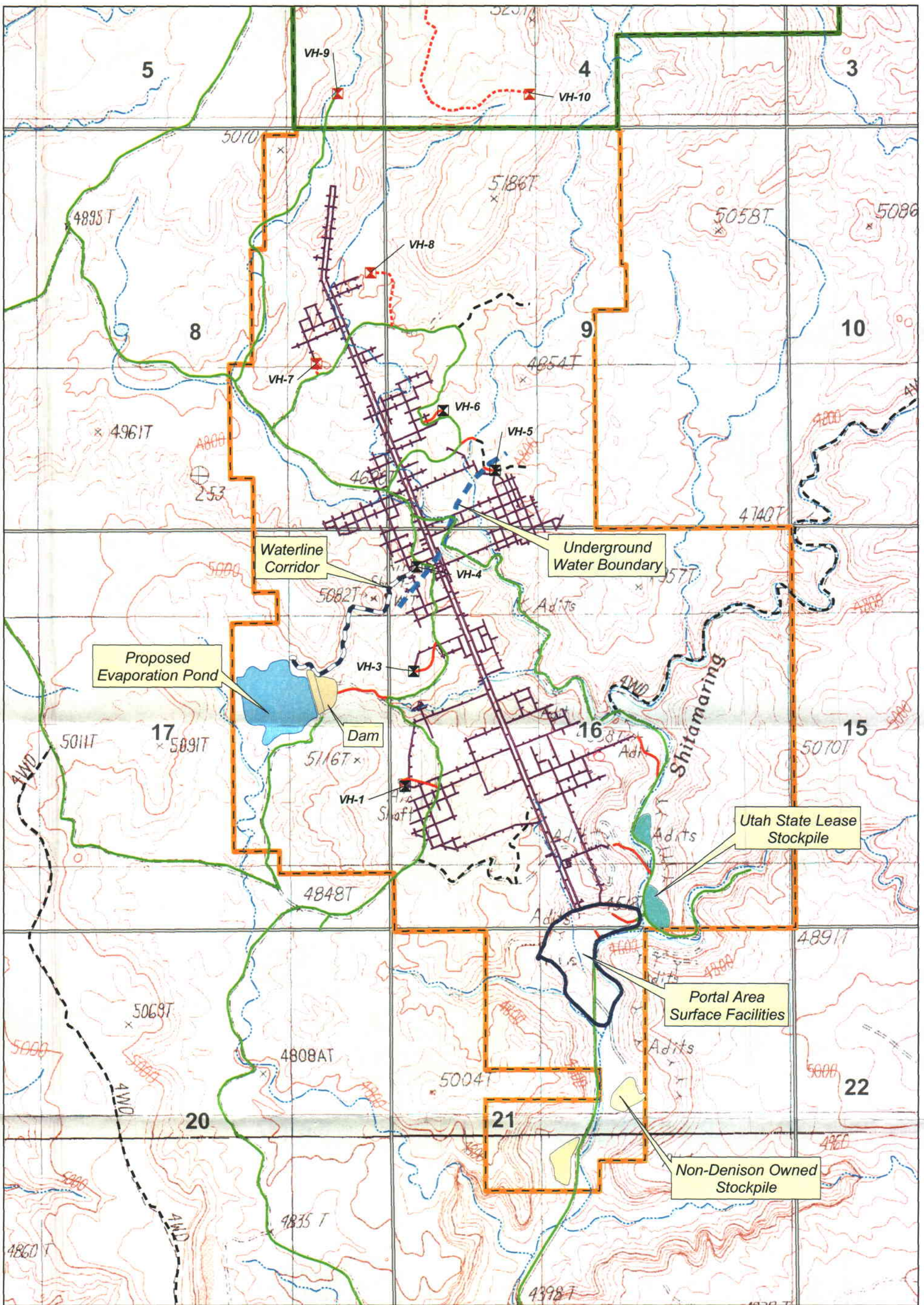


TETRA TECH

DIV OF OIL, GAS & MINING



Legend Surface Disturbance Boundary Constructed Channel Existing Drainage Culvert Site Road Fence		Topsoil Stockpile Area Ore Stockpile Area Waste Rock Area Hard Basin Building Utah State Lease Stockpile		Sediment Basin Underground Workings Phase 1 Boundary Section Line Groundsurface Contours 10-ft Contour 50-ft Contour		<div style="text-align: center;"> RECEIVED JUN 06 2008 <div style="border: 1px solid black; padding: 2px;"> DIV. OF OIL, GAS & MINING </div> </div> <div style="text-align: center;"> </div>		<div style="text-align: center;"> DENISON MINES </div>	
Project: TONY M. MINE		County: Garfield		State: Utah		Location: T. 35S, R. 11E			
DSGN: CW		DRN: KDC		Date: 05/09/2008		Revision: 2			
FIGURE 2 SPCC Tank Locations									
TETRA TECH									



Legend

- | | |
|-----------------------------|----------------------|
| Existing Vent Hole | Phase 1 Boundary |
| Proposed Vent Hole | Phase 2 Boundary |
| Existing Road | Ephemeral Drainage |
| Reconstructed Road | Underground Workings |
| Proposed Road | Section Line |
| Existing 4-Wheel Drive Road | |

RECEIVED

JUN 06 2008

DIV. OF OIL, GAS & MINING



1,000 0 1,000
Feet



Project: TONY M. MINE		
County: Garfield	State: Utah	Location: T 34-35 S, R11 E
DSGN: CW	DRN: KDC	Date: 04/17/2008 Revision: 2

**FIGURE 3
SPCC TOPOGRAPHIC BASE MAP**



TABLE 1
DESCRIPTIVE INVENTORY OF FACILITY STORAGE
HDUSA TONY M MINE SURFACE FACILITIES

Tank	Product Stored	Nominal Capacity (Gallons)	Type	Double Walled?	Additional Information
AST #1	Unleaded Gasoline	500	AST	Yes	Tank will contain s interstitial monitoring and be a Veeder Root 300 TLS interstitial monitoring system connected to an audible-leak detection-system alarm that sounds when the tank reaches 90% fuel capacity. The tank fuel level will be continuously monitored. The tank should also contain a 95% emergency shut-off valve and alarm.
AST #2 and #3	Diesel fuel	5,000 ea. 10,000 total	AST	Yes	Tanks will contain s interstitial monitoring and be a Veeder Root 300 TLS interstitial monitoring system connected to an audible-leak detection-system alarm that sounds when the tank reaches 90% fuel capacity. The tanks fuel levels should will be continuously monitored. The tanks will also contain a 95% emergency shut-off valve and alarm.
AST #4, #5 and #56 (Cummins Generator Belly Tanks)	Diesel fuel	850 ea. 1,700 total	AST	Yes	Tanks will contain interstitial monitoring and be connected to an audible leak detection system that sounds when the tanks reach 90% fuel capacity. Leak detection is provided between the secondary containment (shell) and the steel tanks. The tanks fuel levels should will be continuously monitored. The tanks will also contain a 95% emergency shut-off valve and alarm.
AST #67 (used oil tank)	Used Oil	1,000	AST	No	This tank has not yet been installed. Tank will contain interstitial monitoring and be connected to an audible leak detection system that sounds when the tank reaches 90% capacity. The tank oil level will be continuously monitored. The tank should also contain a 95% emergency shut-off valve and alarm.
AST #78 (Cummins Generator Belly Tank)	Diesel Fuel	110	AST	Yes	Tank likely contains interstitial monitoring and is connected to an audible leak detection system that sounds when the tanks reach 90% fuel capacity. The tanks fuel levels should be continuously monitored. The tank likely also contains a 95% emergency shut-off valve and alarm.
Misc. petroleum products in machine shop.	motor oil, hydraulic oil, gear oil, and used oil	4 - 60 to 100 gallon tanks	AST	No	Room will contain s curbing and concrete floors to provide secondary containment within the building for these tanks. Visual inspection should occur on a weekly basis and be reported monthly to prevent and provide immediate repair of leaks.

Notes:

AST Aboveground storage tank

TABLE 2
POTENTIAL SPILL SOURCES AND VOLUMES
HDUSA TONY M MINE SURFACE FACILITIES

Source	Event	Potential Spill Volume (gallons)	Estimated Rate (Gallons per minute)	Direction of Spill Flow	Remarks
AST #1	Overfilling or a ruptured hose during fueling	>0 to 500	80 ^a	Southwest over mine waste rock area and into temporary diversion ditch, then into temporary sediment basin.	None.
	Structural failure or vandalism	>0 to 500	Variable depending on size of hole	Southwest over mine waste rock area and into temporary diversion ditch, then into temporary sediment basin.	Low probability event that both primary and secondary tank shells would fail.
	Vehicle collision	>0 to 500	Variable depending on size of hole	Southwest over mine waste rock area and into temporary diversion ditch, then into temporary sediment basin.	Low probability event. Earthen b Berms-and bollards are located on the north and west sides of around the tank, protecting it from any vehicle collision.
AST #2 and #3	Overfilling or a ruptured hose during fueling	>0 to 5,000 each	80 ^a	Southwest over mine waste rock area and into temporary diversion ditch, then into temporary sediment basin.	None.
	Failure of fuel supply or return line to generator day tank	>0 to 5,000 each	Variable depending on size of hole	Southwest over mine waste rock area and into temporary diversion ditch, then into temporary sediment basin.	Potential can be minimized through routine inspections.
	Structural failure or vandalism	>0 to 5,000 each	Variable depending on size of hole	Southwest over mine waste rock area and into temporary diversion ditch, then into temporary sediment basin.	Low probability event that both primary and secondary tank shells would fail.
	Vehicle collision	>0 to 5,000 each	Variable depending on size of hole	Southwest over mine waste rock area and into temporary diversion ditch, then into temporary sediment basin.	Low probability event. Earthen b Berms-and bollards are located on the north and west sides of around the tank, protecting it from any vehicle collision.

TABLE 2
POTENTIAL SPILL SOURCES AND VOLUMES
DUSA TONY M MINE SURFACE FACILITIES (Continued)

Source	Event	Potential Spill Volume (gallons)	Estimated Rate (Gallons per minute)	Direction of Spill Flow	Remarks
AST #4, #5 and #6	Failure of fuel supply or return line to generator	>0 to 850	Variable depending on size of hole	Southwest over mine waste rock area and into temporary diversion ditch, then into temporary sediment basin.	Can be minimized through routine inspections.
	Structural failure or vandalism	>0 to 850	Variable depending on size of hole	Southwest over mine waste rock area and into temporary diversion ditch, then into temporary sediment basin.	Low probability event that both primary and secondary tank shells would fail.
AST #7 ¹	Overfilling or a ruptured hose during fueling	>0 to 1,000	80 ^a	South southeast into Shootaring Creek.	None.
	Structural failure or vandalism	>0 to 1,000	Variable depending on size of hole	South southeast into Shootaring Creek	Low probability event that both primary and secondary tank shells would fail.
	Vehicle collision	>0 to 1,000	Variable depending on size of hole	South southeast into Shootaring Creek	Low probability event. Concrete curbing or walls will be provided around the tank to protect from vehicle collision.
AST #7	Failure of fuel supply or return line to generator	>0 to 110	Variable depending on size of hole	Spill would be controlled and maintained by visual observation and spill kits.	Can be minimized through routine inspections.
	Structural failure or vandalism	>0 to 110	Variable depending on size of hole	Spill would be controlled and maintained by visual observation and spill kits.	Low probability event that both primary and secondary tank shells would fail.

Notes:

^a Based on a maximum pumping rate of 80 gallons per minute from the fill truck and a maximum of 30 seconds to turn off the pump.

¹ Tank has not yet been installed.

APPENDIX A
CERTIFICATION OF THE APPLICABILITY OF THE
SUBSTANTIAL HARM CRITERIA CHECKLIST

Facility Name: Tony M Mine
Facility Address: South Half of Section 16 and the North Half of Section 21,
Township 35 South, Range 11 East,
Garfield County, Utah 84726

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

YES _____ NO X _____

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

YES _____ NO X _____

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the formula in Attachment C-III, Appendix C, 40 CFR 112 or a comparable formula¹) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to the DOC/NOAA's "Guidance for Facility and Vessel Response Environments" (Section 10, Appendix E, 40 CFR 112 for availability) and the applicable Area Contingency Plan.

YES _____ NO X _____

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula (Attachment C-III, Appendix C, 40 CFR 112 or a comparable formula¹) such that a discharge from the facility would shut down a public drinking water intake²?

YES _____ NO X _____

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 12,000 gallons within the last 5 years?

YES _____ NO X _____

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Title

Name (Please type or print)

Date

¹If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

²For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2c.

TITLE 40 - PROTECTION OF ENVIRONMENT
(Division: Clean Water Act / Water Programs (CWA))

Revision Date - 04/17/2003

Part 112 - Oil Pollution Prevention

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- §2. Definitions
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- §4. Amendment of Spill Prevention, Control, and Countermeasure Plan by Regional Administrator
- §5. Amendment of Spill Prevention, Control, and Countermeasure Plan by owners or operators
- §6. [Reserved]
- §7. General requirements for Spill Prevention, Control, and Countermeasure Plans

Subpart B. Requirements for Petroleum Oils and Non-Petroleum Oils, Except Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and Vegetable Oils (Including Oils from Seeds, Nuts, Fruits, and Kernels)

- §8. Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities)
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Subpart C. Requirements for Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and for Vegetable Oils, Including Oils from Seeds, Nuts, Fruits, and Kernels

- §12. Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities)
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- §20. Facility response plans
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Appendix A. Memorandum of Understanding Between the Secretary of Transportation and the Administrator of the Environmental Protection Agency

Appendix B. Memorandum of Understanding Among the Secretary of the Interior, Secretary of Transportation, and Administrator of the Environmental Protection Agency

Appendix C. Substantial Harm Criteria

Appendix D. Determination of a Worst Case Discharge Planning Volume

Appendix E. Determination and Evaluation of Required Response Resources for Facility Response Plans

Appendix F. Facility-Specific Response Plan

Authority:

33 U.S.C. 1251 *et seq.*; 33 U.S.C. 2720; E.O. 12777 (October 18, 1991), 3 CFR, 1991 Comp., p. 351.

Source:

38 FR 34165, Dec. 11, 1973, unless otherwise noted.

Editorial Note:

Nomenclature changes to part 112 appear at 65 FR 40798, June 30, 2000.

Subpart A - Applicability, Definitions, and General Requirements for All Facilities and All Types of Oils

Source:

67 FR 47140, July 17, 2002, unless otherwise noted.

top ▲ ▼   

§112.1 General applicability

(a)(1) This part establishes procedures, methods, equipment, and other requirements to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act).

• (2) As used in this part, words in the singular also include the plural and words in the masculine gender also include the feminine and vice versa, as the case may require.

• (b) Except as provided in paragraph (d) of this section, this part applies to any owner or operator of a non-transportation-related onshore or offshore facility engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil and oil products, which due to its location, could reasonably be expected to discharge oil in quantities that may be harmful, as described in part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act) that has oil in:

• (1) Any aboveground container;

• (2) Any completely buried tank as defined in §112.2;

• (3) Any container that is used for standby storage, for seasonal storage, or for temporary storage, or not otherwise “permanently closed” as defined in §112.2;

• (4) Any “bunkered tank” or “partially buried tank” as defined in §112.2, or any container in a vault, each of which is considered an aboveground storage container for purposes of this part.

• (c) As provided in section 313 of the Clean Water Act (CWA), departments, agencies, and instrumentalities of the Federal government are subject to this part to the same extent as any person.

• (d) Except as provided in paragraph (f) of this section, this part does not apply to:

• (1) The owner or operator of any facility, equipment, or operation that is not subject to the jurisdiction of the Environmental Protection Agency (EPA) under section 311(j)(1)(C) of the CWA, as follows:

• (i) Any onshore or offshore facility, that due to its location, could not reasonably be expected to have a discharge as described in paragraph (b) of this section. This determination must be based solely upon consideration of the geographical and location aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and must exclude consideration of manmade features such as dikes, equipment or other structures, which may serve to restrain, hinder, contain, or otherwise prevent a discharge as described in paragraph (b) of this section.

• (ii) Any equipment, or operation of a vessel or transportation-related onshore or offshore facility which is subject to the authority and control of the U.S. Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of EPA, dated November 24, 1971 (Appendix A of this part).

• (iii) Any equipment, or operation of a vessel or onshore or offshore facility which is subject to the authority and control of the U.S. Department of Transportation or the U.S. Department of the Interior, as defined in the Memorandum of Understanding between the

Secretary of Transportation, the Secretary of the Interior, and the Administrator of EPA, dated November 8, 1993 (Appendix B of this part).

1- (2) Any facility which, although otherwise subject to the jurisdiction of EPA, meets both of the following requirements:

1- (i) The completely buried storage capacity of the facility is 42,000 gallons or less of oil. For purposes of this exemption, the completely buried storage capacity of a facility excludes the capacity of a completely buried tank, as defined in §112.2, and connected underground piping, underground ancillary equipment, and containment systems, that is currently subject to all of the technical requirements of part 280 of this chapter or all of the technical requirements of a State program approved under part 281 of this chapter. The completely buried storage capacity of a facility also excludes the capacity of a container that is "permanently closed," as defined in §112.2.

1- (ii) The aggregate aboveground storage capacity of the facility is 1,320 gallons or less of oil. For purposes of this exemption, only containers of oil with a capacity of 55 gallons or greater are counted. The aggregate aboveground storage capacity of a facility excludes the capacity of a container that is "permanently closed," as defined in §112.2.

1- (3) Any offshore oil drilling, production, or workover facility that is subject to the notices and regulations of the Minerals Management Service, as specified in the Memorandum of Understanding between the Secretary of Transportation, the Secretary of the Interior, and the Administrator of EPA, dated November 8, 1993 (Appendix B of this part).

1- (4) Any completely buried storage tank, as defined in §112.2, and connected underground piping, underground ancillary equipment, and containment systems, at any facility, that is subject to all of the technical requirements of part 280 of this chapter or a State program approved under part 281 of this chapter, except that such a tank must be marked on the facility diagram as provided in §112.7(a)(3), if the facility is otherwise subject to this part.

1- (5) Any container with a storage capacity of less than 55 gallons of oil.

1- (6) Any facility or part thereof used exclusively for wastewater treatment and not used to satisfy any requirement of this part. The production, recovery, or recycling of oil is not wastewater treatment for purposes of this paragraph.

1- (e) This part establishes requirements for the preparation and implementation of Spill Prevention, Control, and Countermeasure (SPCC) Plans. SPCC Plans are designed to complement existing laws, regulations, rules, standards, policies, and procedures pertaining to safety standards, fire prevention, and pollution prevention rules. The purpose of an SPCC Plan is to form a comprehensive Federal/State spill prevention program that minimizes the potential for discharges. The SPCC Plan must address all relevant spill prevention, control, and countermeasures necessary at the specific facility. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State, or local laws.

1- (f) Notwithstanding paragraph (d) of this section, the Regional Administrator may require that the owner or operator of any facility subject to the jurisdiction of EPA under section 311(j) of the CWA prepare and implement an SPCC Plan, or any applicable part, to carry out the purposes of the CWA.

(1) Following a preliminary determination, the Regional Administrator must provide a written notice to the owner or operator stating the reasons why he must prepare an SPCC Plan, or applicable part. The Regional Administrator must send such notice to the owner or operator by certified mail or by personal delivery. If the owner or operator is a corporation, the Regional Administrator must also mail a copy of such notice to the registered agent, if any and if known, of the corporation in the State where the facility is located.

(2) Within 30 days of receipt of such written notice, the owner or operator may provide information and data and may consult with the Agency about the need to prepare an SPCC Plan, or applicable part.

(3) Within 30 days following the time under paragraph (b)(2) of this section within which the owner or operator may provide information and data and consult with the Agency about the need to prepare an SPCC Plan, or applicable part, the Regional Administrator must make a final determination regarding whether the owner or operator is required to prepare and implement an SPCC Plan, or applicable part. The Regional Administrator must send the final determination to the owner or operator by certified mail or by personal delivery. If the owner or operator is a corporation, the Regional Administrator must also mail a copy of the final determination to the registered agent, if any and if known, of the corporation in the State where the facility is located.

(4) If the Regional Administrator makes a final determination that an SPCC Plan, or applicable part, is necessary, the owner or operator must prepare the Plan, or applicable part, within six months of that final determination and implement the Plan, or applicable part, as soon as possible, but not later than one year after the Regional Administrator has made a final determination.

(5) The owner or operator may appeal a final determination made by the Regional Administrator requiring preparation and implementation of an SPCC Plan, or applicable part, under this paragraph. The owner or operator must make the appeal to the Administrator of EPA within 30 days of receipt of the final determination under paragraph (b)(3) of this section from the Regional Administrator requiring preparation and/or implementation of an SPCC Plan, or applicable part. The owner or operator must send a complete copy of the appeal to the Regional Administrator at the time he makes the appeal to the Administrator. The appeal must contain a clear and concise statement of the issues and points of fact in the case. In the appeal, the owner or operator may also provide additional information. The additional information may be from any person. The Administrator may request additional information from the owner or operator. The Administrator must render a decision within 60 days of receiving the appeal or additional information submitted by the owner or operator and must serve the owner or operator with the decision made in the appeal in the manner described in paragraph (f)(1) of this section.

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§112.2 Definitions

For the purposes of this part:

Adverse weather means weather conditions that make it difficult for response equipment and personnel to clean up or remove spilled oil, and that must be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include

significant wave height as specified in Appendix E to this part (as appropriate), ice conditions, temperatures, weather-related visibility, and currents within the area in which the systems or equipment is intended to function.

Alteration means any work on a container involving cutting, burning, welding, or heating operations that changes the physical dimensions or configuration of the container.

Animal fat means a non-petroleum oil, fat, or grease of animal, fish, or marine mammal origin.

Breakout tank means a container used to relieve surges in an oil pipeline system or to receive and store oil transported by a pipeline for reinjection and continued transportation by pipeline.

Bulk storage container means any container used to store oil. These containers are used for purposes including, but not limited to, the storage of oil prior to use, while being used, or prior to further distribution in commerce. Oil-filled electrical, operating, or manufacturing equipment is not a bulk storage container.

Bunkered tank means a container constructed or placed in the ground by cutting the earth and re-covering the container in a manner that breaks the surrounding natural grade, or that lies above grade, and is covered with earth, sand, gravel, asphalt, or other material. A bunkered tank is considered an aboveground storage container for purposes of this part.

Completely buried tank means any container completely below grade and covered with earth, sand, gravel, asphalt, or other material. Containers in vaults, bunkered tanks, or partially buried tanks are considered aboveground storage containers for purposes of this part.

Complex means a facility possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the CWA.

Contiguous zone means the zone established by the United States under Article 24 of the Convention of the Territorial Sea and Contiguous Zone, that is contiguous to the territorial sea and that extends nine miles seaward from the outer limit of the territorial area.

Contract or other approved means means:

- (1) A written contractual agreement with an oil spill removal organization that identifies and ensures the availability of the necessary personnel and equipment within appropriate response times; and/or
- (2) A written certification by the owner or operator that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times; and/or
- (3) Active membership in a local or regional oil spill removal organization that has identified and ensures adequate access through such membership to necessary personnel and equipment to respond to a discharge within appropriate response times in the specified geographic area; and/or
- (4) Any other specific arrangement approved by the Regional Administrator upon request of the

owner or operator.

Discharge includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil, but excludes discharges in compliance with a permit under section 402 of the CWA; discharges resulting from circumstances identified, reviewed, and made a part of the public record with respect to a permit issued or modified under section 402 of the CWA, and subject to a condition in such permit; or continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of the CWA, that are caused by events occurring within the scope of relevant operating or treatment systems. For purposes of this part, the term discharge shall not include any discharge of oil that is authorized by a permit issued under section 13 of the River and Harbor Act of 1899 ([33 U.S.C. 407](#)).

Facility means any mobile or fixed, onshore or offshore building, structure, installation, equipment, pipe, or pipeline (other than a vessel or a public vessel) used in oil well drilling operations, oil production, oil refining, oil storage, oil gathering, oil processing, oil transfer, oil distribution, and waste treatment, or in which oil is used, as described in Appendix A to this part. The boundaries of a facility depend on several site-specific factors, including, but not limited to, the ownership or operation of buildings, structures, and equipment on the same site and the types of activity at the site.

Fish and wildlife and sensitive environments means areas that may be identified by their legal designation or by evaluations of Area Committees (for planning) or members of the Federal On-Scene Coordinator's spill response structure (during responses). These areas may include wetlands, National and State parks, critical habitats for endangered or threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archaeological sites and parks. These areas may also include unique habitats such as aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats.

Injury means a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge, or exposure to a product of reactions resulting from a discharge.

Maximum extent practicable means within the limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst case discharges from onshore non-transportation-related facilities in adverse weather. It includes the planned capability to respond to a worst case discharge in adverse weather, as contained in a response plan that meets the requirements in [§112.20](#) or in a specific plan approved by the Regional Administrator.

Navigable waters means the waters of the United States, including the territorial seas.

• (1) The term includes:

- (i) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide;
- (ii) All interstate waters, including interstate wetlands;

• (iii) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:

• (A) That are or could be used by interstate or foreign travelers for recreational or other purposes; or

• (B) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or,

• (C) That are or could be used for industrial purposes by industries in interstate commerce;

• (iv) All impoundments of waters otherwise defined as waters of the United States under this section;

• (v) Tributaries of waters identified in paragraphs (1)(i) through (iv) of this definition;

• (vi) The territorial sea; and

• (vii) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraph (1) of this definition.

• (2) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds which also meet the criteria of this definition) are not waters of the United States. Navigable waters do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with EPA.

Non-petroleum oil means oil of any kind that is not petroleum-based, including but not limited to: Fats, oils, and greases of animal, fish, or marine mammal origin; and vegetable oils, including oils from seeds, nuts, fruits, and kernels.

Offshore facility means any facility of any kind (other than a vessel or public vessel) located in, on, or under any of the navigable waters of the United States, and any facility of any kind that is subject to the jurisdiction of the United States and is located in, on, or under any other waters.

Oil means oil of any kind or in any form, including, but not limited to: fats, oils, or greases of animal, fish, or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits, or kernels; and, other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oil mixed with wastes other than dredged spoil.

Oil Spill Removal Organization means an entity that provides oil spill response resources, and includes any for-profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

Onshore facility means any facility of any kind located in, on, or under any land within the United

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, the U.S. Virgin Islands, and the Pacific Island Governments.

Vegetable oil means a non-petroleum oil or fat of vegetable origin, including but not limited to oils and fats derived from plant seeds, nuts, fruits, and kernels.

Vessel means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water, other than a public vessel.


Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds.


Worst case discharge for an onshore non-transportation-related facility means the largest foreseeable discharge in adverse weather conditions as determined using the worksheets in Appendix D to this part.


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§112.3 Requirement to prepare and implement a Spill Prevention, Control, and Countermeasure Plan

The owner or operator of an onshore or offshore facility subject to this section must prepare a Spill Prevention, Control, and Countermeasure Plan (hereafter “SPCC Plan” or “Plan),” in writing, and in accordance with [§112.7](#), and any other applicable section of this part.

 (a) If your onshore or offshore facility was in operation on or before August 16, 2002, you must maintain your Plan, but must amend it, if necessary to ensure compliance with this part, on or before August 17, 2004, and must implement the amended Plan as soon as possible, but not later than February 18, 2005. If your onshore or offshore facility becomes operational after August 16, 2002, through February 18, 2005, and could reasonably be expected to have a discharge as described in [§112.1\(b\)](#), you must prepare a Plan on or before February 18, 2005, and fully implement it as soon as possible, but not later than February 18, 2005.

 (b) If you are the owner or operator of an onshore or offshore facility that becomes operational after February 18, 2005, and could reasonably be expected to have a discharge as described in [§112.1\(b\)](#), you must prepare and implement a Plan before you begin operations.

 (c) If you are the owner or operator of an onshore or offshore mobile facility, such as an onshore drilling or workover rig, barge mounted offshore drilling or workover rig, or portable fueling facility, you must prepare, implement, and maintain a facility Plan as required by this section. This provision does not require that you prepare a new Plan each time you move the facility to a new site. The Plan may be a general plan. When you move the mobile or portable facility, you must locate and install it using the discharge prevention practices outlined in the Plan for the facility. You may not operate a mobile or portable facility subject to this part unless you have implemented the Plan. The Plan is

applicable only while the facility is in a fixed (non-transportation) operating mode.

• (d) A licensed Professional Engineer must review and certify a Plan for it to be effective to satisfy the requirements of this part.

• (1) By means of this certification the Professional Engineer attests:

• (i) That he is familiar with the requirements of this part ;

• (ii) That he or his agent has visited and examined the facility;

• (iii) That the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of this part;

• (iv) That procedures for required inspections and testing have been established; and

• (v) That the Plan is adequate for the facility.

• (2) Such certification shall in no way relieve the owner or operator of a facility of his duty to prepare and fully implement such Plan in accordance with the requirements of this part.

• (e) If you are the owner or operator of a facility for which a Plan is required under this section, you must:

• (1) Maintain a complete copy of the Plan at the facility if the facility is normally attended at least four hours per day, or at the nearest field office if the facility is not so attended, and

• (2) Have the Plan available to the Regional Administrator for on-site review during normal working hours.

• (f) *Extension of time.* (1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of a Plan, or any amendment thereto, beyond the time permitted for the preparation, implementation, or amendment of a Plan under this part, when he finds that the owner or operator of a facility subject to this section, cannot fully comply with the requirements as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or his agents or employees.

• (2) If you are an owner or operator seeking an extension of time under paragraph (f)(1) of this section, you may submit a written extension request to the Regional Administrator. Your request must include:

• (i) A full explanation of the cause for any such delay and the specific aspects of the Plan affected by the delay;

• (ii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay; and

• (iii) A proposed time schedule for the implementation of any corrective actions being

taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment, or other preventive measures. In addition you may present additional oral or written statements in support of your extension request.

(3) The submission of a written extension request under paragraph (f)(2) of this section does not relieve you of your obligation to comply with the requirements of this part. The Regional Administrator may request a copy of your Plan to evaluate the extension request. When the Regional Administrator authorizes an extension of time for particular equipment or other specific aspects of the Plan, such extension does not affect your obligation to comply with the requirements related to other equipment or other specific aspects of the Plan for which the Regional Administrator has not expressly authorized an extension.

[67 FR 47140, July 17, 2002, as amended at 68 FR 1351, Jan. 9, 2003; 68 FR 18894, Apr. 17, 2003]

§112.4 Amendment of Spill Prevention, Control, and Countermeasure Plan by Regional Administrator

If you are the owner or operator of a facility subject to this part, you must:

(a) Notwithstanding compliance with §112.3, whenever your facility has discharged more than 1,000 U.S. gallons of oil in a single discharge as described in §112.1(b), or discharged more than 42 U.S. gallons of oil in each of two discharges as described in §112.1(b), occurring within any twelve month period, submit the following information to the Regional Administrator within 60 days from the time the facility becomes subject to this section:

- (1) Name of the facility;
- (2) Your name;
- (3) Location of the facility;
- (4) Maximum storage or handling capacity of the facility and normal daily throughput;
- (5) **Corrective action** and countermeasures you have taken, including a description of equipment repairs and replacements;
- (6) An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary;
- (7) The cause of such discharge as described in §112.1(b), including a failure analysis of the system or subsystem in which the failure occurred;
- (8) Additional preventive measures you have taken or contemplated to minimize the possibility of recurrence; and

- † (9) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or discharge.
- † (b) Take no action under this section until it applies to your facility. This section does not apply until the expiration of the time permitted for the initial preparation and implementation of the Plan under §112.3, but not including any amendments to the Plan.
- † (c) Send to the appropriate agency or agencies in charge of oil pollution control activities in the State in which the facility is located a complete copy of all information you provided to the Regional Administrator under paragraph (a) of this section. Upon receipt of the information such State agency or agencies may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment, and other requirements necessary to prevent and to contain discharges from your facility.
- † (d) Amend your Plan, if after review by the Regional Administrator of the information you submit under paragraph (a) of this section, or submission of information to EPA by the State agency under paragraph (c) of this section, or after on-site review of your Plan, the Regional Administrator requires that you do so. The Regional Administrator may require you to amend your Plan if he finds that it does not meet the requirements of this part or that amendment is necessary to prevent and contain discharges from your facility.
- † (e) Act in accordance with this paragraph when the Regional Administrator proposes by certified mail or by personal delivery that you amend your SPCC Plan. If the owner or operator is a corporation, he must also notify by mail the registered agent of such corporation, if any and if known, in the State in which the facility is located. The Regional Administrator must specify the terms of such proposed amendment. Within 30 days from receipt of such notice, you may submit written information, views, and arguments on the proposed amendment. After considering all relevant material presented, the Regional Administrator must either notify you of any amendment required or rescind the notice. You must amend your Plan as required within 30 days after such notice, unless the Regional Administrator, for good cause, specifies another effective date. You must implement the amended Plan as soon as possible, but not later than six months after you amend your Plan, unless the Regional Administrator specifies another date.
- † (f) If you appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan, send the appeal to the EPA Administrator in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment under paragraph (e) of this section. You must send a complete copy of the appeal to the Regional Administrator at the time you make the appeal. The appeal must contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from you, or from any other person. The EPA Administrator may request additional information from you, or from any other person. The EPA Administrator must render a decision within 60 days of receiving the appeal and must notify you of his decision.

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§112.5 Amendment of Spill Prevention, Control, and Countermeasure Plan by owners or operators

If you are the owner or operator of a facility subject to this part, you must:

- (a) Amend the SPCC Plan for your facility in accordance with the general requirements in §112.7, and with any specific section of this part applicable to your facility, when there is a change in the facility design, construction, operation, or maintenance that materially affects its potential for a discharge as described in §112.1(b). Examples of changes that may require amendment of the Plan include, but are not limited to: commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacement, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes of product or service; or revision of standard operation or maintenance procedures at a facility. An amendment made under this section must be prepared within six months, and implemented as soon as possible, but not later than six months following preparation of the amendment.
- (b) Notwithstanding compliance with paragraph (a) of this section, complete a review and evaluation of the SPCC Plan at least once every five years from the date your facility becomes subject to this part; or, if your facility was in operation on or before August 16, 2002, five years from the date your last review was required under this part. As a result of this review and evaluation, you must amend your SPCC Plan within six months of the review to include more effective prevention and control technology if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge as described in §112.1(b) from the facility. You must implement any amendment as soon as possible, but not later than six months following preparation of any amendment. You must document your completion of the review and evaluation, and must sign a statement as to whether you will amend the Plan, either at the beginning or end of the Plan or in a log or an appendix to the Plan. The following words will suffice, "I have completed review and evaluation of the SPCC Plan for (name of facility) on (date), and will (will not) amend the Plan as a result."
- (c) Have a Professional Engineer certify any technical amendment to your Plan in accordance with §112.3(d).

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§112.6 [Reserved]

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§112.7 General requirements for Spill Prevention, Control, and Countermeasure Plans

If you are the owner or operator of a facility subject to this part you must prepare a Plan in accordance with good engineering practices. The Plan must have the full approval of management at a level of authority to commit the necessary resources to fully implement the Plan. You must prepare the Plan in writing. If you do not follow the sequence specified in this section for the Plan, you must prepare an equivalent Plan acceptable to the Regional Administrator that meets all of the applicable requirements listed in this part, and you must supplement it with a section cross-referencing the location of requirements listed in this part and the equivalent requirements in the other prevention plan. If the Plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, you must discuss these items in separate paragraphs, and must explain separately the details of installation and

operational start-up. As detailed elsewhere in this section, you must also:

• (a)(1) Include a discussion of your facility's conformance with the requirements listed in this part.

• (2) Comply with all applicable requirements listed in this part. Your Plan may deviate from the requirements in paragraphs (g), (h)(2) and (3), and (i) of this section and the requirements in subparts B and C of this part, except the secondary containment requirements in paragraphs (c) and (h)(1) of this section, and §§112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11), 112.13(c)(2), and 112.14(c), where applicable to a specific facility, if you provide equivalent environmental protection by some other means of spill prevention, control, or countermeasure. Where your Plan does not conform to the applicable requirements in paragraphs (g), (h)(2) and (3), and (i) of this section, or the requirements of subparts B and C of this part, except the secondary containment requirements in paragraphs (c) and (h)(1) of this section, and §§112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11), 112.13(c)(2), and 112.14(c), you must state the reasons for nonconformance in your Plan and describe in detail alternate methods and how you will achieve equivalent environmental protection. If the Regional Administrator determines that the measures described in your Plan do not provide equivalent environmental protection, he may require that you amend your Plan, following the procedures in §112.4(d) and (e).

• (3) Describe in your Plan the physical layout of the facility and include a facility diagram, which must mark the location and contents of each container. The facility diagram must include completely buried tanks that are otherwise exempted from the requirements of this part under §112.1(d)(4). The facility diagram must also include all transfer stations and connecting pipes. You must also address in your Plan:

• (i) The type of oil in each container and its storage capacity;

• (ii) Discharge prevention measures including procedures for routine handling of products (loading, unloading, and facility transfers, *etc.*);

• (iii) Discharge or drainage controls such as secondary containment around containers and other structures, equipment, and procedures for the control of a discharge;

• (iv) Countermeasures for discharge discovery, response, and cleanup (both the facility's capability and those that might be required of a contractor);

• (v) Methods of disposal of recovered materials in accordance with applicable legal requirements; and

• (vi) Contact list and phone numbers for the facility response coordinator, National Response Center, cleanup contractors with whom you have an agreement for response, and all appropriate Federal, State, and local agencies who must be contacted in case of a discharge as described in §112.1(b).

• (4) Unless you have submitted a response plan under §112.20, provide information and procedures in your Plan to enable a person reporting a discharge as described in §112.1(b) to relate information on the exact address or location and phone number of the facility; the date and time of the discharge, the type of material discharged; estimates of the total quantity discharged; estimates of the quantity discharged as described in §112.1(b); the source of the discharge; a

description of all affected media; the cause of the discharge; any damages or injuries caused by the discharge; actions being used to stop, remove, and mitigate the effects of the discharge; whether an evacuation may be needed; and, the names of individuals and/or organizations who have also been contacted.

• (5) Unless you have submitted a response plan under §112.20, organize portions of the Plan describing procedures you will use when a discharge occurs in a way that will make them readily usable in an emergency, and include appropriate supporting material as appendices.

• (b) Where experience indicates a reasonable potential for equipment failure (such as loading or unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of a discharge), include in your Plan a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each type of major equipment failure.

• (c) Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in §112.1(b). The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank or pipe, will not escape the containment system before cleanup occurs. At a minimum, you must use one of the following prevention systems or its equivalent:

• (1) For onshore facilities:

• (i) Dikes, berms, or retaining walls sufficiently impervious to contain oil;

• (ii) Curbing;

• (iii) Culverting, gutters, or other drainage systems;

• (iv) Weirs, booms, or other barriers;

• (v) Spill diversion ponds;

• (vi) Retention ponds; or

• (vii) Sorbent materials.

• (2) For offshore facilities:

• (i) Curbing or drip pans; or

• (ii) Sumps and collection systems.

• (d) If you determine that the installation of any of the structures or pieces of equipment listed in paragraphs (c) and (h)(1) of this section, and §§112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11), 112.13(c)(2), and 112.14(c) to prevent a discharge as described in §112.1(b) from any onshore or offshore facility is not practicable, you must clearly explain in your Plan why such measures are not practicable; for bulk storage containers, conduct both periodic integrity testing of the containers and periodic integrity and leak testing of the valves and piping; and, unless you have submitted a response plan under §112.20, provide in your Plan the following:

- (1) An oil spill contingency plan following the provisions of part 109 of this chapter.
- (2) A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.
- (e) *Inspections, tests, and records.* Conduct inspections and tests required by this part in accordance with written procedures that you or the certifying engineer develop for the facility. You must keep these written procedures and a record of the inspections and tests, signed by the appropriate supervisor or inspector, with the SPCC Plan for a period of three years. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.
- (f) *Personnel, training, and discharge prevention procedures.* (1) At a minimum, train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan.
 - (2) Designate a person at each applicable facility who is accountable for discharge prevention and who reports to facility management.
 - (3) Schedule and conduct discharge prevention briefings for your oil-handling personnel at least once a year to assure adequate understanding of the SPCC Plan for that facility. Such briefings must highlight and describe known discharges as described in § 112.1(b) or failures, malfunctioning components, and any recently developed precautionary measures.
- (g) *Security (excluding oil production facilities).* (1) Fully fence each facility handling, processing, or storing oil, and lock and/or guard entrance gates when the facility is not in production or is unattended.
 - (2) Ensure that the master flow and drain valves and any other valves permitting direct outward flow of the container's contents to the surface have adequate security measures so that they remain in the closed position when in non-operating or non-standby status.
 - (3) Lock the starter control on each oil pump in the "off" position and locate it at a site accessible only to authorized personnel when the pump is in a non-operating or non-standby status.
 - (4) Securely cap or blank-flange the loading/unloading connections of oil pipelines or facility piping when not in service or when in standby service for an extended time. This security practice also applies to piping that is emptied of liquid content either by draining or by inert gas pressure.
 - (5) Provide facility lighting commensurate with the type and location of the facility that will assist in the:
 - (i) Discovery of discharges occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.); and
 - (ii) Prevention of discharges occurring through acts of vandalism.

† (h) *Facility tank car and tank truck loading/unloading rack (excluding offshore facilities)*. (1) Where loading/unloading area drainage does not flow into a catchment basin or treatment facility designed to handle discharges, use a quick drainage system for tank car or tank truck loading and unloading areas. You must design any containment system to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.

† (2) Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks, or vehicle break interlock system in loading/unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed oil transfer lines.

† (3) Prior to filling and departure of any tank car or tank truck, closely inspect for discharges the lowermost drain and all outlets of such vehicles, and if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.

† (i) If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure due to brittle fracture or other catastrophe, or has discharged oil or failed due to brittle fracture failure or other catastrophe, evaluate the container for risk of discharge or failure due to brittle fracture or other catastrophe, and as necessary, take appropriate action.

† (j) In addition to the minimal prevention standards listed under this section, include in your Plan a complete discussion of conformance with the applicable requirements and other effective discharge prevention and containment procedures listed in this part or any applicable more stringent State rules, regulations, and guidelines.

Subpart B - Requirements for Petroleum Oils and Non-Petroleum Oils, Except Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and Vegetable Oils (Including Oils from Seeds, Nuts, Fruits, and Kernels)

Source:

67 FR 47146, July 17, 2002, unless otherwise noted.

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§112.8 Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities)

If you are the owner or operator of an onshore facility (excluding a production facility), you must:

† (a) Meet the general requirements for the Plan listed under §112.7, and the specific discharge prevention and containment procedures listed in this section.

† (b) *Facility drainage*. (1) Restrain drainage from diked storage areas by valves to prevent a discharge into the drainage system or facility effluent treatment system, except where facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you must manually activate these pumps or ejectors and must inspect the condition of the accumulation

before starting, to ensure no oil will be discharged.

- (2) Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper-type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an on-site wastewater treatment plant, you must inspect and may drain uncontaminated retained stormwater, as provided in paragraphs (c)(3)(ii), (iii), and (iv) of this section.
 - (3) Design facility drainage systems from undiked areas with a potential for a discharge (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.
 - (4) If facility drainage is not engineered as in paragraph (b)(3) of this section, equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility.
 - (5) Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two "lift" pumps and permanently install at least one of the pumps. Whatever techniques you use, you must engineer facility drainage systems to prevent a discharge as described in §112.1(b) in case there is an equipment failure or human error at the facility.
- (c) *Bulk storage containers.* (1) Not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature.
- (2) Construct all bulk storage container installations so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.
 - (3) Not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse, lake, or pond, bypassing the facility treatment system unless you:
 - (i) Normally keep the bypass valve sealed closed.
 - (ii) Inspect the retained rainwater to ensure that its presence will not cause a discharge as described in §112.1(b).
 - (iii) Open the bypass valve and reseal it following drainage under responsible supervision; and
 - (iv) Keep adequate records of such events, for example, any records required under permits issued in accordance with §§122.41(j)(2) and 122.41(m)(3) of this chapter.

1- (4) Protect any completely buried metallic storage tank installed on or after January 10, 1974 from corrosion by coatings or cathodic protection compatible with local soil conditions. You must regularly leak test such completely buried metallic storage tanks.

1- (5) Not use partially buried or bunkered metallic tanks for the storage of oil, unless you protect the buried section of the tank from corrosion. You must protect partially buried and bunkered tanks from corrosion by coatings or cathodic protection compatible with local soil conditions.

1- (6) Test each aboveground container for integrity on a regular schedule, and whenever you make material repairs. The frequency of and type of testing must take into account container size and design (such as floating roof, skid-mounted, elevated, or partially buried). You must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or another system of non-destructive shell testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

1- (7) Control leakage through defective internal heating coils by monitoring the steam return and exhaust lines for contamination from internal heating coils that discharge into an open watercourse, or pass the steam return or exhaust lines through a settling tank, skimmer, or other separation or retention system.

1- (8) Engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:

1- (i) High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.

1- (ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.

1- (iii) Direct audible or code signal communication between the container gauger and the pumping station.

1- (iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.

1- (v) You must regularly test liquid level sensing devices to ensure proper operation.

1- (9) Observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge as described in §112.1(b).

1- (10) Promptly correct visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. You must promptly remove any accumulations of oil in diked areas.

- (11) Position or locate mobile or portable oil storage containers to prevent a discharge as described in §112.1(b). You must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.
- (d) *Facility transfer operations, pumping, and facility process.* (1) Provide buried piping that is installed or replaced on or after August 16, 2002, with a protective wrapping and coating. You must also cathodically protect such buried piping installations or otherwise satisfy the corrosion protection standards for piping in part 280 of this chapter or a State program approved under part 281 of this chapter. If a section of buried line is exposed for any reason, you must carefully inspect it for deterioration. If you find corrosion damage, you must undertake additional examination and **corrective action** as indicated by the magnitude of the damage.
- (2) Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or is in standby service for an extended time.
- (3) Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.
- (4) Regularly inspect all aboveground valves, piping, and appurtenances. During the inspection you must assess the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. You must also conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement.
- (5) Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.

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§112.9 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities

If you are the owner or operator of an onshore production facility, you must:

- (a) Meet the general requirements for the Plan listed under §112.7, and the specific discharge prevention and containment procedures listed under this section.
- (b) *Oil production facility drainage.* (1) At tank batteries and separation and treating areas where there is a reasonable possibility of a discharge as described in §112.1(b), close and seal at all times drains of dikes or drains of equivalent measures required under §112.7(c)(1), except when draining uncontaminated rainwater. Prior to drainage, you must inspect the diked area and take action as provided in §112.8(c)(3)(ii), (iii), and (iv). You must remove accumulated oil on the rainwater and return it to storage or dispose of it in accordance with legally approved methods.
- (2) Inspect at regularly scheduled intervals field drainage systems (such as drainage ditches or road ditches), and oil traps, sumps, or skimmers, for an accumulation of oil that may have resulted from any small discharge. You must promptly remove any accumulations of oil.

• (c) *Oil production facility bulk storage containers.* (1) Not use a container for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

• (2) Provide all tank battery, separation, and treating facility installations with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must safely confine drainage from undiked areas in a catchment basin or holding pond.

• (3) Periodically and upon a regular schedule visually inspect each container of oil for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.

• (4) Engineer or update new and old tank battery installations in accordance with good engineering practice to prevent discharges. You must provide at least one of the following:

• (i) Container capacity adequate to assure that a container will not overflow if a pumper/gauger is delayed in making regularly scheduled rounds.

• (ii) Overflow equalizing lines between containers so that a full container can overflow to an adjacent container.

• (iii) Vacuum protection adequate to prevent container collapse during a pipeline run or other transfer of oil from the container.

• (iv) High level sensors to generate and transmit an alarm signal to the computer where the facility is subject to a computer production control system.

• (d) *Facility transfer operations, oil production facility.* (1) Periodically and upon a regular schedule inspect all aboveground valves and piping associated with transfer operations for the general condition of flange joints, valve glands and bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, and other such items.

• (2) Inspect saltwater (oil field brine) disposal facilities often, particularly following a sudden change in atmospheric temperature, to detect possible system upsets capable of causing a discharge.

• (3) Have a program of flowline maintenance to prevent discharges from each flowline.

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§112.10 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil drilling and workover facilities

If you are the owner or operator of an onshore oil drilling and workover facility, you must:

• (a) Meet the general requirements listed under §112.7, and also meet the specific discharge prevention and containment procedures listed under this section.

- (b) Position or locate mobile drilling or workover equipment so as to prevent a discharge as described in §112.1(b).
- (c) Provide catchment basins or diversion structures to intercept and contain discharges of fuel, crude oil, or oily drilling fluids.
- (d) Install a blowout prevention (BOP) assembly and well control system before drilling below any casing string or during workover operations. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while that BOP assembly and well control system are on the well.

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§112.11 Spill Prevention, Control, and Countermeasure Plan requirements for offshore oil drilling, production, or workover facilities

If you are the owner or operator of an offshore oil drilling, production, or workover facility, you must:

- (a) Meet the general requirements listed under §112.7, and also meet the specific discharge prevention and containment procedures listed under this section.
- (b) Use oil drainage collection equipment to prevent and control small oil discharges around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and associated equipment. You must control and direct facility drains toward a central collection sump to prevent the facility from having a discharge as described in §112.1(b). Where drains and sumps are not practicable, you must remove oil contained in collection equipment as often as necessary to prevent overflow.
- (c) For facilities employing a sump system, provide adequately sized sump and drains and make available a spare pump to remove liquid from the sump and assure that oil does not escape. You must employ a regularly scheduled preventive maintenance inspection and testing program to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.
- (d) At facilities with areas where separators and treaters are equipped with dump valves which predominantly fail in the closed position and where pollution risk is high, specially equip the facility to prevent the discharge of oil. You must prevent the discharge of oil by:
 - (1) Extending the flare line to a diked area if the separator is near shore;
 - (2) Equipping the separator with a high liquid level sensor that will automatically shut in wells producing to the separator; or
 - (3) Installing parallel redundant dump valves.
- (e) Equip atmospheric storage or surge containers with high liquid level sensing devices that activate an alarm or control the flow, or otherwise prevent discharges.

- (f) Equip pressure containers with high and low pressure sensing devices that activate an alarm or control the flow.
- (g) Equip containers with suitable corrosion protection.
- (h) Prepare and maintain at the facility a written procedure within the Plan for inspecting and testing pollution prevention equipment and systems.
- (i) Conduct testing and inspection of the pollution prevention equipment and systems at the facility on a scheduled periodic basis, commensurate with the complexity, conditions, and circumstances of the facility and any other appropriate regulations. You must use simulated discharges for testing and inspecting human and equipment pollution control and countermeasure systems.
- (j) Describe in detailed records surface and subsurface well shut-in valves and devices in use at the facility for each well sufficiently to determine their method of activation or control, such as pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms.
- (k) Install a BOP assembly and well control system during workover operations and before drilling below any casing string. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while the BOP assembly and well control system are on the well.
- (l) Equip all manifolds (headers) with check valves on individual flowlines.
- (m) Equip the flowline with a high pressure sensing device and shut-in valve at the wellhead if the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves. Alternatively you may provide a pressure relief system for flowlines.
- (n) Protect all piping appurtenant to the facility from corrosion, such as with protective coatings or cathodic protection.
- (o) Adequately protect sub-marine piping appurtenant to the facility against environmental stresses and other activities such as fishing operations.
- (p) Maintain sub-marine piping appurtenant to the facility in good operating condition at all times. You must periodically and according to a schedule inspect or test such piping for failures. You must document and keep a record of such inspections or tests at the facility.

Subpart C - Requirements for Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and for Vegetable Oils, Including Oils from Seeds, Nuts, Fruits, and Kernels.

Source:

67 FR 57149, July 17, 2002, unless otherwise noted.

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§112.12 Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities)

If you are the owner or operator of an onshore facility (excluding a production facility), you must:

- (a) Meet the general requirements for the Plan listed under §112.7, and the specific discharge prevention and containment procedures listed in this section.
- (b) *Facility drainage.* (1) Restrain drainage from diked storage areas by valves to prevent a discharge into the drainage system or facility effluent treatment system, except where facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you must manually activate these pumps or ejectors and must inspect the condition of the accumulation before starting, to ensure no oil will be discharged.
 - (2) Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper-type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an on-site wastewater treatment plant, you must inspect and may drain uncontaminated retained stormwater, subject to the requirements of paragraphs (c)(3)(ii), (iii), and (iv) of this section.
 - (3) Design facility drainage systems from undiked areas with a potential for a discharge (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.
 - (4) If facility drainage is not engineered as in paragraph (b)(3) of this section, equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility.
 - (5) Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two "lift" pumps and permanently install at least one of the pumps. Whatever techniques you use, you must engineer facility drainage systems to prevent a discharge as described in §112.1(b) in case there is an equipment failure or human error at the facility.
- (c) *Bulk storage containers.* (1) Not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature.
 - (2) Construct all bulk storage container installations so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.

- (3) Not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse, lake, or pond, bypassing the facility treatment system unless you:

- (i) Normally keep the bypass valve sealed closed.
 - (ii) Inspect the retained rainwater to ensure that its presence will not cause a discharge as described in § 12.1(b).
 - (iii) Open the bypass valve and reseal it following drainage under responsible supervision; and
 - (iv) Keep adequate records of such events, for example, any records required under permits issued in accordance with §§ 122.41(j)(2) and 122.41(m)(3) of this chapter.

- (4) Protect any completely buried metallic storage tank installed on or after January 10, 1974 from corrosion by coatings or cathodic protection compatible with local soil conditions. You must regularly leak test such completely buried metallic storage tanks.

- (5) Not use partially buried or bunkered metallic tanks for the storage of oil, unless you protect the buried section of the tank from corrosion. You must protect partially buried and bunkered tanks from corrosion by coatings or cathodic protection compatible with local soil conditions.

- (6) Test each aboveground container for integrity on a regular schedule, and whenever you make material repairs. The frequency of and type of testing must take into account container size and design (such as floating roof, skid-mounted, elevated, or partially buried). You must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or another system of non-destructive shell testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

- (7) Control leakage through defective internal heating coils by monitoring the steam return and exhaust lines for contamination from internal heating coils that discharge into an open watercourse, or pass the steam return or exhaust lines through a settling tank, skimmer, or other separation or retention system.

- (8) Engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:

- (i) High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.
 - (ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.
 - (iii) Direct audible or code signal communication between the container gauger and the

pumping station.

- (iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.
- (v) You must regularly test liquid level sensing devices to ensure proper operation.
- (9) Observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge as described in §112.1(b).
- (10) Promptly correct visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. You must promptly remove any accumulations of oil in diked areas.
- (11) Position or locate mobile or portable oil storage containers to prevent a discharge as described in §112.1(b). You must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.
- (d) *Facility transfer operations, pumping, and facility process.* (1) Provide buried piping that is installed or replaced on or after August 16, 2002, with a protective wrapping and coating. You must also cathodically protect such buried piping installations or otherwise satisfy the corrosion protection standards for piping in part 280 of this chapter or a State program approved under part 281 of this chapter. If a section of buried line is exposed for any reason, you must carefully inspect it for deterioration. If you find corrosion damage, you must undertake additional examination and **corrective action** as indicated by the magnitude of the damage.
- (2) Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or is in standby service for an extended time.
- (3) Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.
- (4) Regularly inspect all aboveground valves, piping, and appurtenances. During the inspection you must assess the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. You must also conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement.
- (5) Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.

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§112.13 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities

If you are the owner or operator of an onshore production facility, you must:

- (a) Meet the general requirements for the Plan listed under §112.7, and the specific discharge prevention and containment procedures listed under this section.
- (b) *Oil production facility drainage.* (1) At tank batteries and separation and treating areas where there is a reasonable possibility of a discharge as described in §112.1(b), close and seal at all times drains of dikes or drains of equivalent measures required under §112.7(c)(1), except when draining uncontaminated rainwater. Prior to drainage, you must inspect the diked area and take action as provided in §112.12(c)(3)(ii), (iii), and (iv). You must remove accumulated oil on the rainwater and return it to storage or dispose of it in accordance with legally approved methods.
 - (2) Inspect at regularly scheduled intervals field drainage systems (such as drainage ditches or road ditches), and oil traps, sumps, or skimmers, for an accumulation of oil that may have resulted from any small discharge. You must promptly remove any accumulations of oil.
- (c) *Oil production facility bulk storage containers.* (1) Not use a container for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.
 - (2) Provide all tank battery, separation, and treating facility installations with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must safely confine drainage from undiked areas in a catchment basin or holding pond.
 - (3) Periodically and upon a regular schedule visually inspect each container of oil for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.
 - (4) Engineer or update new and old tank battery installations in accordance with good engineering practice to prevent discharges. You must provide at least one of the following:
 - (i) Container capacity adequate to assure that a container will not overflow if a pumper/gauger is delayed in making regularly scheduled rounds.
 - (ii) Overflow equalizing lines between containers so that a full container can overflow to an adjacent container.
 - (iii) Vacuum protection adequate to prevent container collapse during a pipeline run or other transfer of oil from the container.
 - (iv) High level sensors to generate and transmit an alarm signal to the computer where the facility is subject to a computer production control system.
- (d) *Facility transfer operations, oil production facility.* (1) Periodically and upon a regular schedule inspect all aboveground valves and piping associated with transfer operations for the general condition of flange joints, valve glands and bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, and other such items.

- (2) Inspect saltwater (oil field brine) disposal facilities often, particularly following a sudden change in atmospheric temperature, to detect possible system upsets capable of causing a discharge.
- (3) Have a program of flowline maintenance to prevent discharges from each flowline.

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§112.14 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil drilling and workover facilities

If you are the owner or operator of an onshore oil drilling and workover facility, you must:

- (a) Meet the general requirements listed under §112.7, and also meet the specific discharge prevention and containment procedures listed under this section.
- (b) Position or locate mobile drilling or workover equipment so as to prevent a discharge as described in §112.1(b).
- (c) Provide catchment basins or diversion structures to intercept and contain discharges of fuel, crude oil, or oily drilling fluids.
- (d) Install a blowout prevention (BOP) assembly and well control system before drilling below any casing string or during workover operations. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while that BOP assembly and well control system are on the well.

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§112.15 Spill Prevention, Control, and Countermeasure Plan requirements for offshore oil drilling, production, or workover facilities

If you are the owner or operator of an offshore oil drilling, production, or workover facility, you must:

- (a) Meet the general requirements listed under §112.7, and also meet the specific discharge prevention and containment procedures listed under this section.
- (b) Use oil drainage collection equipment to prevent and control small oil discharges around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and associated equipment. You must control and direct facility drains toward a central collection sump to prevent the facility from having a discharge as described in §112.1(b). Where drains and sumps are not practicable, you must remove oil contained in collection equipment as often as necessary to prevent overflow.
- (c) For facilities employing a sump system, provide adequately sized sump and drains and make available a spare pump to remove liquid from the sump and assure that oil does not escape. You must employ a regularly scheduled preventive maintenance inspection and testing program to assure reliable




operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

- (d) At facilities with areas where separators and treaters are equipped with dump valves which predominantly fail in the closed position and where pollution risk is high, specially equip the facility to prevent the discharge of oil. You must prevent the discharge of oil by:

- (1) Extending the flare line to a diked area if the separator is near shore;
 - (2) Equipping the separator with a high liquid level sensor that will automatically shut in wells producing to the separator; or
 - (3) Installing parallel redundant dump valves.
- (e) Equip atmospheric storage or surge containers with high liquid level sensing devices that activate an alarm or control the flow, or otherwise prevent discharges.
- (f) Equip pressure containers with high and low pressure sensing devices that activate an alarm or control the flow.
- (g) Equip containers with suitable corrosion protection.
- (h) Prepare and maintain at the facility a written procedure within the Plan for inspecting and testing pollution prevention equipment and systems.
- (i) Conduct testing and inspection of the pollution prevention equipment and systems at the facility on a scheduled periodic basis, commensurate with the complexity, conditions, and circumstances of the facility and any other appropriate regulations. You must use simulated discharges for testing and inspecting human and equipment pollution control and countermeasure systems.
- (j) Describe in detailed records surface and subsurface well shut-in valves and devices in use at the facility for each well sufficiently to determine their method of activation or control, such as pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms.
- (k) Install a BOP assembly and well control system during workover operations and before drilling below any casing string. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while that BOP assembly and well control system are on the well.
- (l) Equip all manifolds (headers) with check valves on individual flowlines.
- (m) Equip the flowline with a high pressure sensing device and shut-in valve at the wellhead if the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves. Alternatively you may provide a pressure relief system for flowlines.
- (n) Protect all piping appurtenant to the facility from corrosion, such as with protective coatings or cathodic protection.

- (o) Adequately protect sub-marine piping appurtenant to the facility against environmental stresses and other activities such as fishing operations.
- (p) Maintain sub-marine piping appurtenant to the facility in good operating condition at all times. You must periodically and according to a schedule inspect or test such piping for failures. You must document and keep a record of such inspections or tests at the facility.

Subpart D - Response Requirements

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§112.20 Facility response plans

- (a) The owner or operator of any non-transportation-related onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines shall prepare and submit a facility response plan to the Regional Administrator, according to the following provisions:

- (1) For the owner or operator of a facility in operation on or before February 18, 1993 who is required to prepare and submit a response plan under 33 U.S.C. 1321(j)(5), the Oil Pollution Act of 1990 (Pub. L. 101-380, 33 U.S.C. 2701 *et seq.*) requires the submission of a response plan that satisfies the requirements of 33 U.S.C. 1321(j)(5) no later than February 18, 1993.

- (i) The owner or operator of an existing facility that was in operation on or before February 18, 1993 who submitted a response plan by February 18, 1993 shall revise the response plan to satisfy the requirements of this section and resubmit the response plan or updated portions of the response plan to the Regional Administrator by February 18, 1995.

- (ii) The owner or operator of an existing facility in operation on or before February 18, 1993 who failed to submit a response plan by February 18, 1993 shall prepare and submit a response plan that satisfies the requirements of this section to the Regional Administrator before August 30, 1994.

- (2) The owner or operator of a facility in operation on or after August 30, 1994 that satisfies the criteria in paragraph (f)(1) of this section or that is notified by the Regional Administrator pursuant to paragraph (b) of this section shall prepare and submit a facility response plan that satisfies the requirements of this section to the Regional Administrator.

- (i) For a facility that commenced operations after February 18, 1993 but prior to August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan or updated portions of the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to August 30, 1994.

- (ii) For a newly constructed facility that commences operation after August 30, 1994,

and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to the start of operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

- (iii) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of a planned change in design, construction, operation, or maintenance that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator before the portion of the facility undergoing change commences operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

- (iv) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of an unplanned event or change in facility characteristics that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator within six months of the unplanned event or change.

- (3) In the event the owner or operator of a facility that is required to prepare and submit a response plan uses an alternative formula that is comparable to one contained in Appendix C to this part to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula.

- (4) *Preparation and submission of response plans-Animal fat and vegetable oil facilities.* The owner or operator of any non-transportation-related facility that handles, stores, or transports animal fats and vegetable oils must prepare and submit a facility response plan as follows:

- (i) *Facilities with approved plans.* The owner or operator of a facility with a facility response plan that has been approved under paragraph (c) of this section by July 31, 2000 need not prepare or submit a revised plan except as otherwise required by paragraphs (b), (c), or (d) of this section.

- (ii) *Facilities with plans that have been submitted to the Regional Administrator.* Except for facilities with approved plans as provided in paragraph (a)(4)(i) of this section, the owner or operator of a facility that has submitted a response plan to the Regional Administrator prior to July 31, 2000 must review the plan to determine if it meets or exceeds the applicable provisions of this part. An owner or operator need not prepare or submit a new plan if the existing plan meets or exceeds the applicable provisions of this part. If the plan does not meet or exceed the applicable provisions of this part, the owner or operator must prepare and submit a new plan by September 28, 2000.

- (iii) *Newly regulated facilities.* The owner or operator of a newly constructed facility that commences operation after July 31, 2000 must prepare and submit a plan to the Regional Administrator in accordance with paragraph (a)(2)(ii) of this section. The plan must meet or exceed the applicable provisions of this part. The owner or operator of an existing facility that must prepare and submit a plan after July 31, 2000 as a result of a planned or unplanned change in facility characteristics that causes the facility to become regulated under paragraph (f)(1) of this section, must prepare and submit a plan to the Regional Administrator in accordance with paragraph (a)(2)(iii) or (iv) of this section, as appropriate. The plan must meet or exceed the applicable provisions of this part.
- (iv) *Facilities amending existing plans.* The owner or operator of a facility submitting an amended plan in accordance with paragraph (d) of this section after July 31, 2000, including plans that had been previously approved, must also review the plan to determine if it meets or exceeds the applicable provisions of this part. If the plan does not meet or exceed the applicable provisions of this part, the owner or operator must revise and resubmit revised portions of an amended plan to the Regional Administrator in accordance with paragraph (d) of this section, as appropriate. The plan must meet or exceed the applicable provisions of this part.
- (b)(1) The Regional Administrator may at any time require the owner or operator of any non-transportation-related onshore facility to prepare and submit a facility response plan under this section after considering the factors in paragraph (f)(2) of this section. If such a determination is made, the Regional Administrator shall notify the facility owner or operator in writing and shall provide a basis for the determination. If the Regional Administrator notifies the owner or operator in writing of the requirement to prepare and submit a response plan under this section, the owner or operator of the facility shall submit the response plan to the Regional Administrator within six months of receipt of such written notification.
- (2) The Regional Administrator shall review plans submitted by such facilities to determine whether the facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.
- (c) The Regional Administrator shall determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, based on the factors in paragraph (f)(3) of this section. If such a determination is made, the Regional Administrator shall notify the owner or operator of the facility in writing and:
 - (1) Promptly review the facility response plan;
 - (2) Require amendments to any response plan that does not meet the requirements of this section;
 - (3) Approve any response plan that meets the requirements of this section; and
 - (4) Review each response plan periodically thereafter on a schedule established by the Regional Administrator provided that the period between plan reviews does not exceed five years.

- (d)(1) The owner or operator of a facility for which a response plan is required under this part shall revise and resubmit revised portions of the response plan within 60 days of each facility change that materially may affect the response to a worst case discharge, including:

- (i) A change in the facility's configuration that materially alters the information included in the response plan;
- (ii) A change in the type of oil handled, stored, or transferred that materially alters the required response resources;
- (iii) A material change in capabilities of the oil spill removal organization(s) that provide equipment and personnel to respond to discharges of oil described in paragraph (h)(5) of this section;
- (iv) A material change in the facility's spill prevention and response equipment or emergency response procedures; and
- (v) Any other changes that materially affect the implementation of the response plan.

- (2) Except as provided in paragraph (d)(1) of this section, amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that does not result in a material change in support capabilities do not require approval by the Regional Administrator. Facility owners or operators shall provide a copy of such changes to the Regional Administrator as the revisions occur.

- (3) The owner or operator of a facility that submits changes to a response plan as provided in paragraph (d)(1) or (d)(2) of this section shall provide the EPA-issued facility identification number (where one has been assigned) with the changes.

- (4) The Regional Administrator shall review for approval changes to a response plan submitted pursuant to paragraph (d)(1) of this section for a facility determined pursuant to paragraph (f)(3) of this section to have the potential to cause significant and substantial harm to the environment.

- (e) If the owner or operator of a facility determines pursuant to paragraph (a)(2) of this section that the facility could not, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the owner or operator shall complete and maintain at the facility the certification form contained in Appendix C to this part and, in the event an alternative formula that is comparable to one contained in Appendix C to this part is used to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

- (f)(1) A facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (a)(2) of this section, if it meets any of the following criteria applied in accordance with the flowchart contained in Attachment C-I to Appendix C to this part:

- (i) The facility transfers oil over water to or from vessels and has a total oil storage

capacity greater than or equal to 42,000 gallons; or

- (ii) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one of the following is true:

- (A) The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground oil storage tank within each storage area plus sufficient freeboard to allow for precipitation;

- (B) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III of the "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan prepared pursuant to section 311(j)(4) of the Clean Water Act;

- (C) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake; or

- (D) The facility has had a reportable oil discharge in an amount greater than or equal to 10,000 gallons within the last 5 years.

- (2)(i) To determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (b) of this section, the Regional Administrator shall consider the following:

- (A) Type of transfer operation;

- (B) Oil storage capacity;

- (C) Lack of secondary containment;

- (D) Proximity to fish and wildlife and sensitive environments and other areas determined by the Regional Administrator to possess ecological value;

- (E) Proximity to drinking water intakes;

- (F) Spill history; and

- (G) Other site-specific characteristics and environmental factors that the Regional Administrator determines to be relevant to protecting the environment from harm by discharges of oil into or on navigable waters or adjoining shorelines.

- (ii) Any person, including a member of the public or any representative from a Federal,

State, or local agency who believes that a facility subject to this section could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines may petition the Regional Administrator to determine whether the facility meets the criteria in paragraph (f)(2)(i) of this section. Such petition shall include a discussion of how the factors in paragraph (f)(2)(i) of this section apply to the facility in question. The RA shall consider such petitions and respond in an appropriate amount of time.

- (3) To determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the Regional Administrator may consider the factors in paragraph (f)(2) of this section as well as the following:

- (i) Frequency of past discharges;
- (ii) Proximity to navigable waters;
- (iii) Age of oil storage tanks; and
- (iv) Other facility-specific and Region-specific information, including local impacts on public health.

- (g)(1) All facility response plans shall be consistent with the requirements of the National Oil and Hazardous Substance Pollution Contingency Plan (40 CFR part 300) and applicable Area Contingency Plans prepared pursuant to section 311(j)(4) of the Clean Water Act. The facility response plan should be coordinated with the local emergency response plan developed by the local emergency planning committee under section 303 of (Title) _____ III of the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 11001 et seq.). Upon request, the owner or operator should provide a copy of the facility response plan to the local emergency planning committee or State emergency response commission.

- (2) The owner or operator shall review relevant portions of the National Oil and Hazardous Substances Pollution Contingency Plan and applicable Area Contingency Plan annually and, if necessary, revise the facility response plan to ensure consistency with these plans.

- (3) The owner or operator shall review and update the facility response plan periodically to reflect changes at the facility.

- (h) A response plan shall follow the format of the model facility-specific response plan included in Appendix F to this part, unless you have prepared an equivalent response plan acceptable to the Regional Administrator to meet State or other Federal requirements. A response plan that does not follow the specified format in Appendix F to this part shall have an emergency response action plan as specified in paragraphs (h)(1) of this section and be supplemented with a cross-reference section to identify the location of the elements listed in paragraphs (h)(2) through (h)(10) of this section. To meet the requirements of this part, a response plan shall address the following elements, as further described in Appendix F to this part:

- (1) *Emergency response action plan.* The response plan shall include an emergency response action plan in the format specified in paragraphs (h)(1)(i) through (viii) of this section that is maintained in the front of the response plan, or as a separate document accompanying the

response plan, and that includes the following information:

- (i) The identity and telephone number of a qualified individual having full authority, including contracting authority, to implement removal actions;
 - (ii) The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal officials and the persons providing response personnel and equipment can be ensured;
 - (iii) A description of information to pass to response personnel in the event of a reportable discharge;
 - (iv) A description of the facility's response equipment and its location;
 - (v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;
 - (vi) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;
 - (vii) A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of discharged oil; and
 - (viii) A diagram of the facility.
- (2) *Facility information.* The response plan shall identify and discuss the location and type of the facility, the identity and tenure of the present owner and operator, and the identity of the qualified individual identified in paragraph (h)(1) of this section.
- (3) *Information about emergency response.* The response plan shall include:
- (i) The identity of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge and other discharges of oil described in paragraph (h)(5) of this section, and to mitigate or prevent a substantial threat of a worst case discharge (To identify response resources to meet the facility response plan requirements of this section, owners or operators shall follow Appendix E to this part or, where not appropriate, shall clearly demonstrate in the response plan why use of Appendix E of this part is not appropriate at the facility and make comparable arrangements for response resources);
 - (ii) Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;
 - (iii) The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal official and the persons providing response personnel and equipment can be ensured;

- (iv) A description of information to pass to response personnel in the event of a reportable discharge;
- (v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;
- (vi) A description of the facility's response equipment, the location of the equipment, and equipment testing;
- (vii) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;
- (viii) A diagram of evacuation routes; and
- (ix) A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:
 - (A) Activate internal alarms and hazard communication systems to notify all facility personnel;
 - (B) Notify all response personnel, as needed;
 - (C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;
 - (D) Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;
 - (E) Assess the interaction of the discharged substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;
 - (F) Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);
 - (G) Assess and implement prompt removal actions to contain and remove the substance released;
 - (H) Coordinate rescue and response actions as previously arranged with all response personnel;
 - (I) Use authority to immediately access company funding to initiate cleanup activities; and

- (J) Direct cleanup activities until properly relieved of this responsibility.
- (4) *Hazard evaluation.* The response plan shall discuss the facility's known or reasonably identifiable history of discharges reportable under 40 CFR part 110 for the entire life of the facility and shall identify areas within the facility where discharges could occur and what the potential effects of the discharges would be on the affected environment. To assess the range of areas potentially affected, owners or operators shall, where appropriate, consider the distance calculated in paragraph (f)(1)(ii) of this section to determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.
- (5) *Response planning levels.* The response plan shall include discussion of specific planning scenarios for:
 - (i) A worst case discharge, as calculated using the appropriate worksheet in Appendix D to this part. In cases where the Regional Administrator determines that the worst case discharge volume calculated by the facility is not appropriate, the Regional Administrator may specify the worst case discharge amount to be used for response planning at the facility. For complexes, the worst case planning quantity shall be the larger of the amounts calculated for each component of the facility;
 - (ii) A discharge of 2,100 gallons or less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility; and
 - (iii) A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility.
- (6) *Discharge detection systems.* The response plan shall describe the procedures and equipment used to detect discharges.
- (7) *Plan implementation.* The response plan shall describe:
 - (i) Response actions to be carried out by facility personnel or contracted personnel under the response plan to ensure the safety of the facility and to mitigate or prevent discharges described in paragraph (h)(5) of this section or the substantial threat of such discharges;
 - (ii) A description of the equipment to be used for each scenario;
 - (iii) Plans to dispose of contaminated cleanup materials; and
 - (iv) Measures to provide adequate containment and drainage of discharged oil.
- (8) *Self-inspection, drills/exercises, and response training.* The response plan shall include:

- (i) A checklist and record of inspections for tanks, secondary containment, and response equipment;
 - (ii) A description of the drill/exercise program to be carried out under the response plan as described in §112.21;
 - (iii) A description of the training program to be carried out under the response plan as described in §112.21; and
 - (iv) Logs of discharge prevention meetings, training sessions, and drills/exercises. These logs may be maintained as an annex to the response plan.
- (9) *Diagrams*. The response plan shall include site plan and drainage plan diagrams.
 - (10) *Security systems*. The response plan shall include a description of facility security systems.
 - (11) *Response plan cover sheet*. The response plan shall include a completed response plan cover sheet provided in Section 2.0 of Appendix F to this part.
- (i)(1) In the event the owner or operator of a facility does not agree with the Regional Administrator's determination that the facility could, because of its location, reasonably be expected to cause substantial harm or significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, or that amendments to the facility response plan are necessary prior to approval, such as changes to the worst case discharge planning volume, the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The request and accompanying information must be submitted to the Regional Administrator within 60 days of receipt of notice of the Regional Administrator's original decision. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.
 - (2) In the event the owner or operator of a facility believes a change in the facility's classification status is warranted because of an unplanned event or change in the facility's characteristics (i.e., substantial harm or significant and substantial harm), the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.
 - (3) After a request for reconsideration under paragraph (i)(1) or (i)(2) of this section has been denied by the Regional Administrator, an owner or operator may appeal a determination made by the Regional Administrator. The appeal shall be made to the EPA Administrator and shall be made in writing within 60 days of receipt of the decision from the Regional Administrator that the request for reconsideration was denied. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It also may contain additional information from the owner or operator, or from any other person. The EPA Administrator may request additional information from the owner or operator, or from any other person. The EPA Administrator shall render a decision as rapidly as practicable and shall notify the owner or operator of the decision.

[59 FR 34098, July 1, 1994, as amended at 65 FR 40798, June 30, 2000; 66 FR 34560, June 29, 2001; 67 FR 47151, July 17, 2002]

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§112.21 Facility response training and drills/exercises

· (a) The owner or operator of any facility required to prepare a facility response plan under §112.20 shall develop and implement a facility response training program and a drill/exercise program that satisfy the requirements of this section. The owner or operator shall describe the programs in the response plan as provided in §112.20(h)(8).

· (b) The facility owner or operator shall develop a facility response training program to train those personnel involved in oil spill response activities. It is recommended that the training program be based on the USCG's Training Elements for Oil Spill Response, as applicable to facility operations. An alternative program can also be acceptable subject to approval by the Regional Administrator.

· (1) The owner or operator shall be responsible for the proper instruction of facility personnel in the procedures to respond to discharges of oil and in applicable oil spill response laws, rules, and regulations.

· (2) Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel.

· (3) Trainers shall develop specific lesson plans on subject areas relevant to facility personnel involved in oil spill response and cleanup.

· (c) The facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. A program that follows the National Preparedness for Response Exercise Program (PREP) (see Appendix E to this part, section 13, for availability) will be deemed satisfactory for purposes of this section. An alternative program can also be acceptable subject to approval by the Regional Administrator.

[59 FR 34101, July 1, 1994, as amended at 65 FR 40798, June 30, 2000]

Appendix A - Memorandum of Understanding Between the Secretary of Transportation and the Administrator of the Environmental Protection Agency

section ii-definitions

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

· (1) *Non-transportation-related onshore and offshore facilities* means:

· (A) Fixed onshore and offshore oil well drilling facilities including all equipment and

appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

- (B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

- (C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

- (D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

- (E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

- (F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding inline or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

- (G) Industrial, commercial, agricultural or public facilities which use and store oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

- (H) Waste treatment facilities including in-plant pipelines, effluent discharge lines, and storage tanks, but excluding waste treatment facilities located on vessels and terminal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems used for off-loading vessels.

- (I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

- (J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facility and which are not intended to transport oil in interstate or intrastate commerce.

- (K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.
- (2) *Transportation-related onshore and offshore facilities* means:
 - (A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.
 - (B) Transfer hoses, loading arms and other equipment appurtenant to a non-transportation-related facility which is used to transfer oil in bulk to or from a vessel.
 - (C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.
 - (D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the rights-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended for use in interstate or intrastate commerce.

Appendix B - Memorandum of Understanding Among the Secretary of the Interior, Secretary of Transportation, and Administrator of the Environmental Protection Agency

Purpose

This Memorandum of Understanding (MOU) establishes the jurisdictional responsibilities for offshore facilities, including pipelines, pursuant to section 311 (j)(1)(c), (j)(5), and (j)(6)(A) of the Clean Water Act (CWA), as amended by the Oil Pollution Act of 1990 (Public Law 101-380). The Secretary of the Department of the Interior (DOI), Secretary of the Department of Transportation (DOT), and Administrator of the Environmental Protection Agency (EPA) agree to the division of responsibilities set forth below for spill prevention and control, response planning, and equipment inspection activities pursuant to those provisions.

Background

Executive Order (E.O.) 12777 (56 FR 54757) delegates to DOI, DOT, and EPA various responsibilities identified in section 311(j) of the CWA. Sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 assigned to DOI spill prevention and control, contingency planning, and equipment inspection activities associated with offshore facilities. Section 311(a)(11) defines the term "offshore facility" to include facilities of any kind located in, on, or under navigable waters of the United States. By using this definition, the traditional DOI role of regulating facilities on the Outer Continental Shelf is expanded by E.O. 12777 to include inland lakes, rivers, streams, and any other inland waters.

Responsibilities

Pursuant to section 2(i) of E.O. 12777, DOI redelegates, and EPA and DOT agree to assume, the functions vested in DOI by sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 as set forth below. For purposes of this MOU, the term "coast line" shall be defined as in the Submerged Lands Act (43 U.S.C. 1301(c)) to mean "the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters."

1. To EPA, DOI redelegates responsibility for non-transportation-related offshore facilities located landward of the coast line.
2. To DOT, DOI redelegates responsibility for transportation-related facilities, including pipelines, located landward of the coast line. The DOT retains jurisdiction for deepwater ports and their associated seaward pipelines, as delegated by E.O. 12777.
3. The DOI retains jurisdiction over facilities, including pipelines, located seaward of the coast line, except for deepwater ports and associated seaward pipelines delegated by E.O. 12777 to DOT.

Effective Date

This MOU is effective on the date of the final execution by the indicated signatories.

Limitations

1. The DOI, DOT, and EPA may agree in writing to exceptions to this MOU on a facility-specific basis. Affected parties will receive notification of the exceptions.
2. Nothing in this MOU is intended to replace, supersede, or modify any existing agreements between or among DOI, DOT, or EPA.

Modification and Termination

Any party to this agreement may propose modifications by submitting them in writing to the heads of the other agency/department. No modification may be adopted except with the consent of all parties. All parties shall indicate their consent to or disagreement with any proposed modification within 60 days of receipt. Upon the request of any party, representatives of all parties shall meet for the purpose of considering exceptions or modifications to this agreement. This MOU may be terminated only with the mutual consent of all parties.

Dated: November 8, 1993.

Bruce Babbitt,

Secretary of the Interior.

Dated: December 14, 1993.

Federico Peña,

Secretary of Transportation.

Dated: February 3, 1994.

Carol M. Browner,

Administrator, Environmental Protection Agency.

[59 FR 34102, July 1, 1994]

Appendix C - Substantial Harm Criteria

1.0 ____ Introduction

The flowchart provided in Attachment C-I to this appendix shows the decision tree with the criteria to identify whether a facility "could reasonably be expected to cause substantial harm to the environment by discharging into or on the navigable waters or adjoining shorelines." In addition, the Regional Administrator has the discretion to identify facilities that must prepare and submit facility-specific response plans to EPA.

1.1 ____ Definitions

1.1.1 ____ *Great Lakes* means Lakes Superior, Michigan, Huron, Erie, and Ontario, their connecting and tributary waters, the Saint Lawrence River as far as Saint Regis, and adjacent port areas.

1.1.2 ____ Higher Volume Port Areas include

- (1) Boston, MA;
- (2) New York, NY;
- (3) Delaware Bay and River to Philadelphia, PA;
- (4) St. Croix, VI;

- (5) Pascagoula, MS;
- (6) Mississippi River from Southwest Pass, LA to Baton Rouge, LA;
- (7) Louisiana Offshore Oil Port (LOOP), LA;
- (8) Lake Charles, LA;
- (9) Sabine-Neches River, TX;
- (10) Galveston Bay and Houston Ship Channel, TX;
- (11) Corpus Christi, TX;
- (12) Los Angeles/Long Beach Harbor, CA;
- (13) San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch, CA;
- (14) Straits of Juan de Fuca from Port Angeles, WA to and including Puget Sound, WA;
- (15) Prince William Sound, AK; and
- (16) Others as specified by the Regional Administrator for any EPA Region.

1.1.3 Inland Area means the area shoreward of the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines as defined in 33 CFR 80.740-80.850). The inland area does not include the Great Lakes.

1.1.4 Rivers and Canals means a body of water confined within the inland area, including the Intracoastal Waterways and other waterways artificially created for navigating that have project depths of 12 feet or less.

2.0 Description of Screening Criteria for the Substantial Harm Flowchart

A facility that has the potential to cause substantial harm to the environment in the event of a discharge must prepare and submit a facility-specific response plan to EPA in accordance with Appendix F to this part. A description of the screening criteria for the substantial harm flowchart is provided below:

2.1 Non-Transportation-Related Facilities With a Total Oil Storage Capacity Greater Than or Equal to 42,000 Gallons Where Operations Include Over-Water Transfers of Oil. A non-transportation-related facility with a total oil storage capacity greater than or equal to 42,000 gallons that transfers oil over water to or from vessels must submit a response plan to EPA. Daily oil transfer operations at these types of facilities occur between barges and vessels and onshore bulk storage tanks over open water. These facilities are located adjacent to navigable water.

2.2 Lack of Adequate Secondary Containment at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons. Any facility with a total oil storage capacity greater than

or equal to 1 million gallons without secondary containment sufficiently large to contain the capacity of the largest aboveground oil storage tank within each area plus sufficient freeboard to allow for precipitation must submit a response plan to EPA. Secondary containment structures that meet the standard of good engineering practice for the purposes of this part include berms, dikes, retaining walls, curbing, culverts, gutters, or other drainage systems.

2.3 *Proximity to Fish and Wildlife and Sensitive Environments at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility with a total oil storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility could cause injury (as defined at 40 CFR 112.2) to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan. Facility owners or operators must determine the distance at which an oil discharge could cause injury to fish and wildlife and sensitive environments using the appropriate formula presented in Attachment C-III to this appendix or a comparable formula.

2.4 *Proximity to Public Drinking Water Intakes at Facilities with a Total Oil Storage Capacity Greater than or Equal to 1 Million Gallons* A facility with a total oil storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility would shut down a public drinking water intake, which is analogous to a public water system as described at 40 CFR 143.2(c). The distance at which an oil discharge from an SPCC-regulated facility would shut down a public drinking water intake shall be calculated using the appropriate formula presented in Attachment C-III to this appendix or a comparable formula.

2.5 *Facilities That Have Experienced Reportable Oil Discharges in an Amount Greater Than or Equal to 10,000 Gallons Within the Past 5 Years and That Have a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility's oil spill history within the past 5 years shall be considered in the evaluation for substantial harm. Any facility with a total oil storage capacity greater than or equal to 1 million gallons that has experienced a reportable oil discharge in an amount greater than or equal to 10,000 gallons within the past 5 years must submit a response plan to EPA.

3.0 *Certification for Facilities That Do Not Pose Substantial Harm*

If the facility does not meet the substantial harm criteria listed in Attachment C-I to this appendix, the owner or operator shall complete and maintain at the facility the certification form contained in Attachment C-II to this appendix. In the event an alternative formula that is comparable to the one in this appendix is used to evaluate the substantial harm criteria, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

4.0 *References*

Chow, V.T. 1959. Open Channel Hydraulics. McGraw Hill.

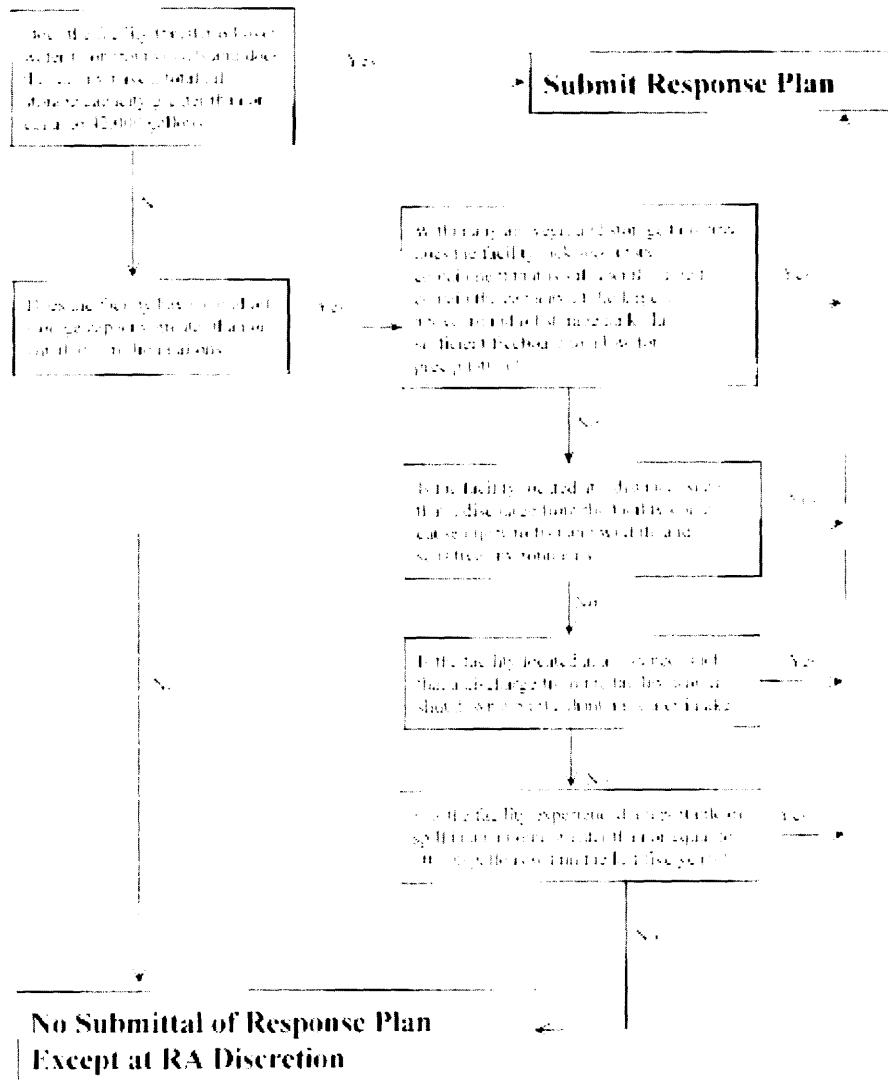
USCG IFR (58 FR 7353, February 5, 1993). This document is available through EPA's rulemaking

docket as noted in Appendix E to this part, section 13.

Attachments to Appendix C

Attachment C-I

Flowchart of Criteria for Substantial Harm



Calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula.

For further description of fish and wildlife and sensitive environments, see Appendices E-II and III to 40 CFR, NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 12733, March 29, 1994) and the applicable Area Contingency Plan.

Public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

Attachment C-II-Certification of the Applicability of the Substantial Harm Criteria

Facility Name: Facility Address:

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes _____ No _____

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

Yes _____ No _____

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula 1) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan.

Yes _____ No _____

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula 1) such that a discharge from the facility would shut down a public drinking water intake 2 ?

1If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

2For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

Yes _____ No _____

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil discharge in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes _____ No _____

Certification

I certify under penalty of law that I have personally examined and am familiar with the information

submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

(Signature) _____

Name (please type or print)

(Title) _____

Date

Attachment C-III-Calculatation of the Planning Distance

1.0 ____ Introduction

1.1 ____ The facility owner or operator must evaluate whether the facility is located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments or disrupt operations at a public drinking water intake. To quantify that distance, EPA considered oil transport mechanisms over land and on still, tidal influence, and moving navigable waters. EPA has determined that the primary concern for calculation of a planning distance is the transport of oil in navigable waters during adverse weather conditions. Therefore, two formulas have been developed to determine distances for planning purposes from the point of discharge at the facility to the potential site of impact on moving and still waters, respectively. The formula for oil transport on moving navigable water is based on the velocity of the water body and the time interval for arrival of response resources. The still water formula accounts for the spread of discharged oil over the surface of the water. The method to determine oil transport on tidal influence areas is based on the type of oil discharged and the distance down current during ebb tide and up current during flood tide to the point of maximum tidal influence.

1.2 ____ EPA's formulas were designed to be simple to use. However, facility owners or operators may calculate planning distances using more sophisticated formulas, which take into account broader scientific or engineering principles, or local conditions. Such comparable formulas may result in different planning distances than EPA's formulas. In the event that an alternative formula that is comparable to one contained in this appendix is used to evaluate the criterion in 40 CFR 112.20(f)(1)(ii)(B) or (f)(1)(ii)(C), the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula and shall notify the Regional Administrator in writing that an alternative formula was used. 1

1 For persistent oils or non-persistent oils, a worst case trajectory model (i.e., an alternative formula) may be substituted for the distance formulas described in still, moving, and tidal waters, subject to Regional Administrator's review of the model. An example of an alternative formula that is comparable to the one contained in this appendix would be a worst case trajectory calculation based on credible adverse winds, currents, and/or river stages, over a range of seasons, weather conditions, and river stages. Based on historical information or a spill trajectory model, the Agency may require that additional fish and wildlife and sensitive environments or public drinking water intakes also be protected.

1.3 ____ A regulated facility may meet the criteria for the potential to cause substantial harm to the environment without having to perform a planning distance calculation. For facilities that meet the

substantial harm criteria because of inadequate secondary containment or oil spill history, as listed in the flowchart in Attachment C-I to this appendix, calculation of the planning distance is unnecessary. For facilities that do not meet the substantial harm criteria for secondary containment or oil spill history as listed in the flowchart, calculation of a planning distance for proximity to fish and wildlife and sensitive environments and public drinking water intakes is required, unless it is clear without performing the calculation (e.g., the facility is located in a wetland) that these areas would be impacted.

1.4 ____ A facility owner or operator who must perform a planning distance calculation on navigable water is only required to do so for the type of navigable water conditions (i.e., moving water, still water, or tidal- influenced water) applicable to the facility. If a facility owner or operator determines that more than one type of navigable water condition applies, then the facility owner or operator is required to perform a planning distance calculation for each navigable water type to determine the greatest single distance that oil may be transported. As a result, the final planning distance for oil transport on water shall be the greatest individual distance rather than a summation of each calculated planning distance.

1.5 ____ The planning distance formula for transport on moving waterways contains three variables: the velocity of the navigable water (v), the response time interval (t), and a conversion factor (c). The velocity, v , is determined by using the Chezy-Manning equation, which, in this case, models the flood flow rate of water in open channels. The Chezy-Manning equation contains three variables which must be determined by facility owners or operators. Manning's Roughness Coefficient (for flood flow rates), n , can be determined from Table 1 of this attachment. The hydraulic radius, r , can be estimated using the average mid-channel depth from charts provided by the sources listed in Table 2 of this attachment. The average slope of the river, s , can be determined using topographic maps that can be ordered from the U.S. Geological Survey, as listed in Table 2 of this attachment.

1.6 ____ Table 3 of this attachment contains specified time intervals for estimating the arrival of response resources at the scene of a discharge. Assuming no prior planning, response resources should be able to arrive at the discharge site within 12 hours of the discovery of any oil discharge in Higher Volume Port Areas and within 24 hours in Great Lakes and all other river, canal, inland, and nearshore areas. The specified time intervals in Table 3 of Appendix C are to be used only to aid in the identification of whether a facility could cause substantial harm to the environment. Once it is determined that a plan must be developed for the facility, the owner or operator shall reference Appendix E to this part to determine appropriate resource levels and response times. The specified time intervals of this appendix include a 3-hour time period for deployment of boom and other response equipment. The Regional Administrator may identify additional areas as appropriate.

2.0 ____ Oil Transport on Moving Navigable Waters

2.1 ____ The facility owner or operator must use the following formula or a comparable formula as described in § 112.20(a)(3) to calculate the planning distance for oil transport on moving navigable water:

$$d = v \times t \times c; \text{ where}$$

d : the distance downstream from a facility within which fish and wildlife and sensitive

environments could be injured or a public drinking water intake would be shut down in the event of an oil discharge (in miles);

v: the velocity of the river/navigable water of concern (in ft/sec) as determined by Chezy-Manning's equation (see below and Tables 1 and 2 of this attachment);

t: the time interval specified in Table 3 based upon the type of water body and location (in hours); and

c: constant conversion factor 0.68 sec/mile/hr to ft (3600 sec/hr ÷ 5280 ft/mile).

2.2 Chezy-Manning's equation is used to determine velocity:

$v = 1.48/n \times r^{2/3} \times s^{1/2}$; where

v=the velocity of the river of concern (in ft/sec);

n=Manning's Roughness Coefficient from Table 1 of this attachment;

r=the hydraulic radius; the hydraulic radius can be approximated for parabolic channels by multiplying the average mid-channel depth of the river (in feet) by 0.667 (sources for obtaining the mid-channel depth are listed in Table 2 of this attachment); and

s=the average slope of the river (unitless) obtained from U.S. Geological Survey topographic maps at the address listed in Table 2 of this attachment.

Table 1_Manning's Roughness Coefficient for Natural Streams
[Note: Coefficients are presented for high flow rates at or near flood stage.]

Stream description	Roughness coefficient (n)

Minor Streams (Top Width <100 ft.)	
Clean:	
Straight.....	0.03
Winding.....	0.04
Sluggish (Weedy, deep pools):	
No trees or brush.....	0.06
Trees and/or brush.....	0.10
Major Streams (Top Width 100 ft.)	
Regular section:	
(No boulders/brush).....	0.035

Irregular section:
(Brush) 0.05

Table 2-Sources of r and s for the Chezy-Manning Equation

All of the charts and related publications for navigational waters may be ordered from:

Distribution Branch

(N/CG33)

National Ocean Service

Riverdale, Maryland 20737-1199

Phone: (301) 436-6990

There will be a charge for materials ordered and a VISA or Mastercard will be accepted.

The mid-channel depth to be used in the calculation of the hydraulic radius (r) can be obtained directly from the following sources:

Charts of Canadian Coastal and Great Lakes Waters:

Canadian Hydrographic Service

Department of Fisheries and Oceans Institute

P.O. Box 8080

1675 Russell Road

Ottawa, Ontario K1G 3H6

Canada

Phone: (613) 998-4931

Charts and Maps of Lower Mississippi River

(Gulf of Mexico to Ohio River and St. Francis, White, Big Sunflower, Atchafalaya, and other rivers):

U.S. Army Corps of Engineers

Vicksburg District

P.O. Box 60

Vicksburg, Mississippi 39180

Phone: (601) 634-5000

Charts of Upper Mississippi River and Illinois Waterway to Lake Michigan:

U.S. Army Corps of Engineers

Rock Island District

P.O. Box 2004

Rock Island, Illinois 61204

Phone: (309) 794-5552

Charts of Missouri River:

U.S. Army Corps of Engineers

Omaha District

6014 U.S. Post Office and Courthouse

Omaha, Nebraska 68102

Phone: (402) 221-3900

Charts of Ohio River:

U.S. Army Corps of Engineers

Ohio River Division

P.O. Box 1159

Cincinnati, Ohio 45201

Phone: (513) 684-3002

Charts of Tennessee Valley Authority Reservoirs, Tennessee River and Tributaries:

Tennessee Valley Authority

Maps and Engineering Section

416 Union Avenue

Knoxville, Tennessee 37902

Phone: (615) 632-2921

Charts of Black Warrior River, Alabama River, Tombigbee River, Apalachicola River and Pearl River:

U.S. Army Corps of Engineers

Mobile District

P.O. Box 2288

Mobile, Alabama 36628-0001

Phone: (205) 690-2511

The average slope of the river (s) may be obtained from topographic maps:

U.S. Geological Survey

Map Distribution

Federal Center

Bldg. 41

Box 25286

Denver, Colorado 80225

Additional information can be obtained from the following sources:

1. The State's Department of Natural Resources (DNR) or the State's Aids to Navigation office;
2. A knowledgeable local marina operator; or
3. A knowledgeable local water authority (e.g., State water commission)

2.3 ____ The average slope of the river (s) can be determined from the topographic maps using the following steps:

- (1) Locate the facility on the map.
- (2) Find the Normal Pool Elevation at the point of discharge from the facility into the water (A).
- (3) Find the Normal Pool Elevation of the public drinking water intake or fish and wildlife and sensitive environment located downstream (B) (Note: The owner or operator should use a minimum of 20 miles downstream as a cutoff to obtain the average slope if the location of a specific public drinking water intake or fish and wildlife and sensitive environment is unknown).
- (4) If the Normal Pool Elevation is not available, the elevation contours can be used to find the slope. Determine elevation of the water at the point of discharge from the facility (A). Determine the elevation of the water at the appropriate distance downstream (B). The formula presented below can be used to calculate the slope.
- (5) Determine the distance (in miles) between the facility and the public drinking water intake or fish and wildlife and sensitive environments (C).
- (6) Use the following formula to find the slope, which will be a unitless value: Average Slope=[(A-B) (ft)/C (miles)] × [1 mile/5280 feet]

2.4 ____ If it is not feasible to determine the slope and mid-channel depth by the Chezy-Manning equation, then the river velocity can be approximated on- site. A specific length, such as 100 feet, can be marked off along the shoreline. A float can be dropped into the stream above the mark, and the time required for the float to travel the distance can be used to determine the velocity in feet per second. However, this method will not yield an average velocity for the length of the stream, but a velocity only for the specific location of measurement. In addition, the flow rate will vary depending on weather conditions such as wind and rainfall. It is recommended that facility owners or operators repeat the measurement under a variety of conditions to obtain the most accurate estimate of the surface water velocity under adverse weather conditions.

2.5 ____ The planning distance calculations for moving and still navigable waters are based on worst case discharges of persistent oils. Persistent oils are of concern because they can remain in the water for significant periods of time and can potentially exist in large quantities downstream. Owners or operators of facilities that store persistent as well as non-persistent oils may use a comparable formula. The volume of oil discharged is not included as part of the planning distance calculation for moving navigable waters. Facilities that will meet this substantial harm criterion are those with facility capacities greater than or equal to 1 million gallons. It is assumed that these facilities are capable of having an oil discharge of sufficient quantity to cause injury to fish and wildlife and sensitive environments or shut down a public drinking water intake. While owners or operators of transfer facilities that store greater than or equal to 42,000 gallons are not required to use a planning distance formula for purposes of the substantial harm criteria, they should use a planning distance calculation in the development of facility-specific response plans.

Table 3_Specified Time Intervals

Substantial harm planning

Operating areas	time (hrs)
Higher volume port area.....	12 hour arrival+3 hour deployment=15 hours.
Great Lakes.....	24 hour arrival+3 hour deployment=27 hours.
All other rivers and canals, inland, and nearshore areas.	24 hour arrival+3 hour deployment=27 hours.

2.6 Example of the Planning Distance Calculation for Oil Transport on Moving Navigable Waters. The following example provides a sample calculation using the planning distance formula for a facility discharging oil into the Monongahela River:

- (1) Solve for v by evaluating n , r , and s for the Chezy-Manning equation:

Find the roughness coefficient, n , on Table 1 of this attachment for a regular section of a major stream with a top width greater than 100 feet. The top width of the river can be found from the topographic map.

$$n=0.035.$$

Find slope, s , where $A=727$ feet, $B=710$ feet, and $C=25$ miles.

Solving:

$$s=[(727 \text{ ft}-710 \text{ ft})/25 \text{ miles}] \times [1 \text{ mile}/5280 \text{ feet}]=1.3 \times 10^{-4}$$

The average mid-channel depth is found by averaging the mid-channel depth for each mile along the length of the river between the facility and the public drinking water intake or the fish or wildlife or sensitive environment (or 20 miles downstream if applicable). This value is multiplied by 0.667 to obtain the hydraulic radius. The mid-channel depth is found by obtaining values for r and s from the sources shown in Table 2 for the Monongahela River.

Solving:

$$r=0.667 \times 20 \text{ feet}=13.33 \text{ feet}$$

Solve for v using:

$$v=1.48/n \times r^{2/3} \times s^{1/2}:$$

$$v=[1.5/0.035]\times(13.33)^{2/3}\times(1.3\times 10^{-4})^{1/2}$$

$$v=2.73 \text{ feet/second}$$

· (2) Find t from Table 3 of this attachment. The Monongahela River's resource response time is 27 hours.

· (3) Solve for planning distance, d:

$$d=v\times t\times c$$

$$d=(2.73 \text{ ft/sec})\times(27 \text{ hours})\times(0.68 \text{ sec}\omega \text{ mile/hr}\omega \text{ ft})$$

$$d=50 \text{ miles}$$

Therefore, 50 miles downstream is the appropriate planning distance for this facility.

3.0 ____ Oil Transport on Still Water

3.1 ____ For bodies of water including lakes or ponds that do not have a measurable velocity, the spreading of the oil over the surface must be considered. Owners or operators of facilities located next to still water bodies may use a comparable means of calculating the planning distance. If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable calculation must be attached to the response plan cover sheet.

3.2 ____ *Example of the Planning Distance Calculation for Oil Transport on Still Water.* To assist those facilities which could potentially discharge into a still body of water, the following analysis was performed to provide an example of the type of formula that may be used to calculate the planning distance. For this example, a worst case discharge of 2,000,000 gallons is used.

· (1) The surface area in square feet covered by an oil discharge on still water, A1, can be determined by the following formula, 2 where V is the volume of the discharge in gallons and C is a constant conversion factor:

2Huang, J.C. and Monastero, F.C., 1982. *Review of the State-of-the-Art of Oil Pollution Models*. Final report submitted to the American Petroleum Institute by Raytheon Ocean Systems, Co., East Providence, Rhode Island.

$$A1=105\times V^{3/4}\times C$$

$$C=0.1643$$

$$A1=105 \times (2,000,000 \text{ gallons})^{3/4} \times (0.1643)$$

$$A1=8.74 \times 10^8 \text{ ft}^2$$

· (2) The spreading formula is based on the theoretical condition that the oil will spread uniformly in all directions forming a circle. In reality, the outfall of the discharge will direct the oil to the surface of the water where it intersects the shoreline. Although the oil will not spread uniformly in all directions, it is assumed that the discharge will spread from the shoreline into a semi-circle (this assumption does not account for winds or wave action).

· (3) The area of a circle = πr^2

· (4) To account for the assumption that oil will spread in a semi-circular shape, the area of a circle is divided by 2 and is designated as A2.

$$A2=(\pi r^2)/2$$

Solving for the radius, r, using the relationship $A1=A2$: $8.74 \times 10^8 \text{ ft}^2 = (\pi r^2)/2$

Therefore, $r=23,586 \text{ ft}$

$$r=23,586 \text{ ft} \div 5,280 \text{ ft/mile} = 4.5 \text{ miles}$$

Assuming a 20 knot wind under storm conditions:

$$1 \text{ knot} = 1.15 \text{ miles/hour}$$

$$20 \text{ knots} \times 1.15 \text{ miles/hour/knot} = 23 \text{ miles/hr}$$

Assuming that the oil slick moves at 3 percent of the wind's speed: 3

Oil Spill Prevention & Control. National Spill Control School, Corpus Christi State University, Thirteenth Edition, May 1990.

$$23 \text{ miles/hour} \times 0.03 = 0.69 \text{ miles/hour}$$

· (5) To estimate the distance that the oil will travel, use the times required for response resources to

arrive at different geographic locations as shown in Table 3 of this attachment.

For example:

For Higher Volume Port Areas: $15 \text{ hrs} \times 0.69 \text{ miles/hr} = 10.4 \text{ miles}$

For Great Lakes and all other areas: $27 \text{ hrs} \times 0.69 \text{ miles/hr} = 18.6 \text{ miles}$

(6) The total distance that the oil will travel from the point of discharge, including the distance due to spreading, is calculated as follows:

Higher Volume Port Areas: $d = 10.4 + 4.5 \text{ miles}$ or approximately 15 miles

Great Lakes and all other areas: $d = 18.6 + 4.5 \text{ miles}$ or approximately 23 miles

4.0 ___ Oil Transport on Tidal-Influence Areas

4.1 ___ The planning distance method for tidal influence navigable water is based on worst case discharges of persistent and non-persistent oils. Persistent oils are of primary concern because they can potentially cause harm over a greater distance. For persistent oils discharged into tidal waters, the planning distance is 15 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 15 miles, whichever is less, during flood tide.

4.2 ___ For non-persistent oils discharged into tidal waters, the planning distance is 5 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 5 miles, whichever is less, during flood tide.

4.3 ___ *Example of Determining the Planning Distance for Two Types of Navigable Water Conditions.* Below is an example of how to determine the proper planning distance when a facility could impact two types of navigable water conditions: moving water and tidal water.

(1) Facility X stores persistent oil and is located downstream from locks along a slow moving river which is affected by tides. The river velocity, v , is determined to be 0.5 feet/second from the Chezy-Manning equation used to calculate oil transport on moving navigable waters. The specified time interval, t , obtained from Table 3 of this attachment for river areas is 27 hours. Therefore, solving for the planning distance, d :

$$d = v \times t \times c$$

$$d = (0.5 \text{ ft/sec}) \times (27 \text{ hours}) \times (0.68 \text{ sec/mile/hrft})$$

d=9.18 miles.

(2) However, the planning distance for maximum tidal influence down current during ebb tide is 15 miles, which is greater than the calculated 9.18 miles. Therefore, 15 miles downstream is the appropriate planning distance for this facility.

5.0 ____ Oil Transport Over Land

5.1 ____ Facility owners or operators must evaluate the potential for oil to be transported over land to navigable waters of the United States. The owner or operator must evaluate the likelihood that portions of a worst case discharge would reach navigable waters via open channel flow or from sheet flow across the land, or be prevented from reaching navigable waters when trapped in natural or man-made depressions excluding secondary containment structures.

5.2 ____ As discharged oil travels over land, it may enter a storm drain or open concrete channel intended for drainage. It is assumed that once oil reaches such an inlet, it will flow into the receiving navigable water. During a storm event, it is highly probable that the oil will either flow into the drainage structures or follow the natural contours of the land and flow into the navigable water. Expected minimum and maximum velocities are provided as examples of open concrete channel and pipe flow. The ranges listed below reflect minimum and maximum velocities used as design criteria. 4 The calculation below demonstrates that the time required for oil to travel through a storm drain or open concrete channel to navigable water is negligible and can be considered instantaneous. The velocities are:

4The design velocities were obtained from Howard County, Maryland Department of Public Works' Storm Drainage Design Manual.

For open concrete channels:

maximum velocity=25 feet per second

minimum velocity=3 feet per second

For storm drains:

maximum velocity=25 feet per second

minimum velocity=2 feet per second

5.3 ____ Assuming a length of 0.5 mile from the point of discharge through an open concrete channel or concrete storm drain to a navigable water, the travel times (distance/velocity) are:

1.8 minutes at a velocity of 25 feet per second

14.7 minutes at a velocity of 3 feet per second

22.0 minutes for at a velocity of 2 feet per second

5.4 ____ The distances that shall be considered to determine the planning distance are illustrated in Figure C-I of this attachment. The relevant distances can be described as follows:

D1=Distance from the nearest opportunity for discharge, X1, to a storm drain or an open concrete channel leading to navigable water.

D2=Distance through the storm drain or open concrete channel to navigable water.

D3=Distance downstream from the outfall within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down as determined by the planning distance formula.

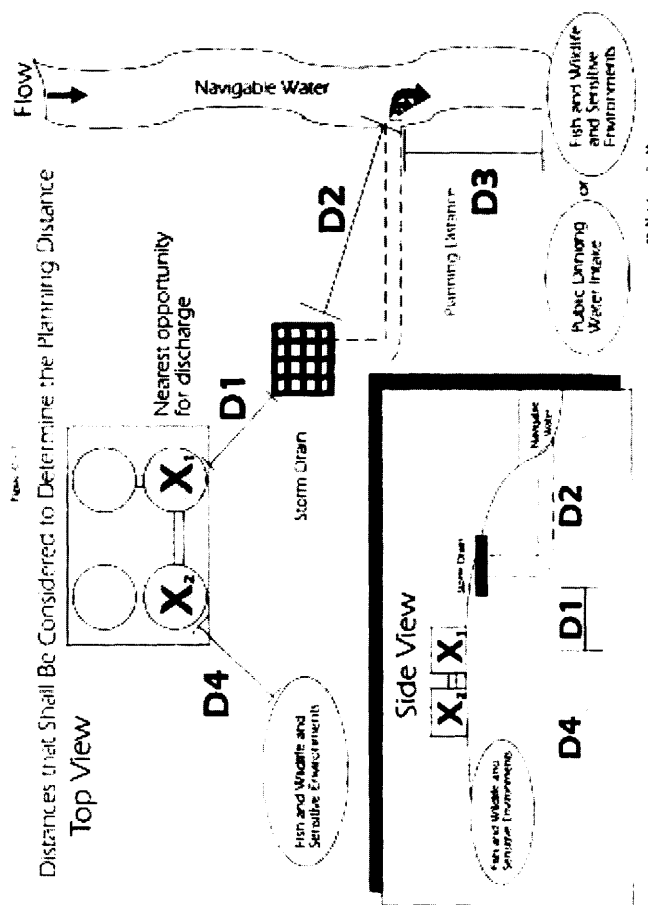
D4=Distance from the nearest opportunity for discharge, X2, to fish and wildlife and sensitive environments not bordering navigable water.

5.5 ____ A facility owner or operator whose nearest opportunity for discharge is located within 0.5 mile of a navigable water must complete the planning distance calculation (D3) for the type of navigable water near the facility or use a comparable formula.

5.6 ____ A facility that is located at a distance greater than 0.5 mile from a navigable water must also calculate a planning distance (D3) if it is in close proximity (i.e., D1 is less than 0.5 mile and other factors are conducive to oil travel over land) to storm drains that flow to navigable waters. Factors to be considered in assessing oil transport over land to storm drains shall include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity. Storm drains or concrete drainage channels that are located in close proximity to the facility can provide a direct pathway to navigable waters, regardless of the length of the drainage pipe. If D1 is less than or equal to 0.5 mile, a discharge from the facility could pose substantial harm because the time to travel the distance from the storm drain to the navigable water (D2) is virtually instantaneous.

5.7 ____ A facility's proximity to fish and wildlife and sensitive environments not bordering a navigable water, as depicted as D4 in Figure C-I of this attachment, must also be considered, regardless of the distance from the facility to navigable waters. Factors to be considered in assessing oil transport over land to fish and wildlife and sensitive environments should include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity.

5.8 ____ If a facility is not found to pose substantial harm to fish and wildlife and sensitive environments not bordering navigable waters via oil transport on land, then supporting documentation should be maintained at the facility. However, such documentation should be submitted with the response plan if a facility is found to pose substantial harm.



[59 FR 34102, July 1, 1994, as amended at 65 FR 40798, June 30, 2000; 67 FR 47152, July 17, 2002]

Appendix D - Determination of a Worst Case Discharge Planning Volume

1.0 ____ Instructions

1.1 ____ An owner or operator is required to complete this worksheet if the facility meets the criteria, as presented in Appendix C to this part, or it is determined by the RA that the facility could cause substantial harm to the environment. The calculation of a worst case discharge planning volume is used for emergency planning purposes, and is required in 40 CFR 112.20 for facility owners or operators who must prepare a response plan. When planning for the amount of resources and equipment necessary to respond to the worst case discharge planning volume, adverse weather

conditions must be taken into consideration. An owner or operator is required to determine the facility's worst case discharge planning volume from either part A of this appendix for an onshore storage facility, or part B of this appendix for an onshore production facility. The worksheet considers the provision of adequate secondary containment at a facility.

1.2 ____ For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In a worst case discharge scenario, a single failure could cause the discharge of the contents of more than one tank. The owner or operator must provide evidence in the response plan that tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge planning volume would be based on the capacity of the largest oil storage tank within a common secondary containment area or the largest oil storage tank within a single secondary containment area, whichever is greater. For permanently manifolded tanks that function as one oil storage unit, the worst case discharge planning volume would be based on the combined oil storage capacity of all manifolded tanks or the capacity of the largest single oil storage tank within a secondary containment area, whichever is greater. For purposes of this rule, permanently manifolded tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.3 ____ For production facilities, the presence of exploratory wells, production wells, and oil storage tanks must be considered in the calculation. Part B of this appendix takes these additional factors into consideration and provides steps for their inclusion in the total worst case discharge planning volume. Onshore oil production facilities may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator. Although a potential worst case discharge planning volume is calculated within each section of the worksheet, the final worst case amount depends on the risk parameter that results in the greatest volume.

1.4 ____ Marine transportation-related transfer facilities that contain fixed aboveground onshore structures used for bulk oil storage are jointly regulated by EPA and the U.S. Coast Guard (USCG), and are termed "complexes." Because the USCG also requires response plans from transportation-related facilities to address a worst case discharge of oil, a separate calculation for the worst case discharge planning volume for USCG-related facilities is included in the USCG IFR (see Appendix E to this part, section 13, for availability). All complexes that are jointly regulated by EPA and the USCG must compare both calculations for worst case discharge planning volume derived by using the EPA and USCG methodologies and plan for whichever volume is greater.

PART A: WORST CASE DISCHARGE PLANNING VOLUME CALCULATION FOR ONSHORE STORAGE FACILITIES 1

1 "Storage facilities" represent all facilities subject to this part, excluding oil production facilities.

Part A of this worksheet is to be completed by the owner or operator of an SPCC-regulated facility (excluding oil production facilities) if the facility meets the criteria as presented in Appendix C to this part, or if it is determined by the RA that the facility could cause substantial harm to the environment. If you are the owner or operator of a production facility, please proceed to part B of this worksheet.

A.1 _____ SINGLE-TANK FACILITIES

For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the oil storage tank. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the oil storage tank, multiply the capacity of the tank by 0.8.

- (1) FINAL WORST CASE VOLUME: _____ GAL
- (2) Do not proceed further.

A.2 _____ SECONDARY CONTAINMENT-MULTIPLE-TANK FACILITIES

Are *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility *without* adequate secondary containment? 2

2Secondary containment is described in 40 CFR part 112, subparts A through C. Acceptable methods and structures for containment are also given in 40 CFR 112.7(c)(1).

_____ (Y/N)

A.2.1 _____ If the answer is yes, the final worst case discharge planning volume equals the *total aboveground oil storage capacity at the facility*.

- (1) FINAL WORST CASE VOLUME: _____ GAL
- (2) Do not proceed further.

A.2.2 _____ If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER "0" (zero).

_____ GAL

A.2.3 _____ Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, PLUS THE VOLUME FROM QUESTION A.2.2.

FINAL WORST CASE VOLUME: 3 _____ GAL

3All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

PART B: WORST CASE DISCHARGE PLANNING VOLUME CALCULATION FOR ONSHORE PRODUCTION FACILITIES

Part B of this worksheet is to be completed by the owner or operator of an SPCC-regulated oil production facility if the facility meets the criteria presented in Appendix C to this part, or if it is determined by the RA that the facility could cause substantial harm. A production facility consists of all wells (producing and exploratory) and related equipment in a single geographical oil or gas field operated by a single operator.

B.1 ____ SINGLE-TANK FACILITIES

B.1.1 ____ For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the aboveground oil storage tank plus the production volume of the well with the highest output at the facility. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the storage tank, multiply the capacity of the tank by 0.8.

B.1.2 ____ For facilities with production wells producing by pumping, if the rate of the well with the highest output is known and the number of days the facility is unattended can be predicted, then the production volume is equal to the pumping rate of the well multiplied by the greatest number of days the facility is unattended.

B.1.3 ____ If the pumping rate of the well with the highest output is estimated or the maximum number of days the facility is unattended is estimated, then the production volume is determined from the pumping rate of the well multiplied by 1.5 times the greatest number of days that the facility has been or is expected to be unattended.

B.1.4 ____ Attachment D-1 to this appendix provides methods for calculating the production volume for exploratory wells and production wells producing under pressure.

· (1) FINAL WORST CASE VOLUME: ____ GAL

· (2) Do not proceed further.

B.2 ____ SECONDARY CONTAINMENT-MULTIPLE-TANK FACILITIES

Are *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility *without* adequate secondary containment?

____ (Y/N)

B.2.1 ____ If the answer is yes, the final worst case volume equals the total aboveground oil storage capacity without adequate secondary containment plus the production volume of the well with the highest output at the facility.

· (1) For facilities with production wells producing by pumping, if the rate of the well with the highest output is known and the number of days the facility is unattended can be predicted, then the production volume is equal to the pumping rate of the well multiplied by the greatest number of days the facility is unattended.

· (2) If the pumping rate of the well with the highest output is estimated or the maximum number of days the facility is unattended is estimated, then the production volume is determined from the pumping rate of the well multiplied by 1.5 times the greatest number of days that the facility has been or is expected to be unattended.

· (3) Attachment D-1 to this appendix provides methods for calculating the production volumes for exploratory wells and production wells producing under pressure.

· (A) FINAL WORST CASE VOLUME: ____ GAL

· (B) Do not proceed further.

B.2.2 ____ If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER "0" (zero).

____ GAL

B.2.3 ____ Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, plus the production volume of the well with the highest output, PLUS THE VOLUME FROM QUESTION B.2.2. Attachment D-1 provides methods for calculating the production volumes for exploratory wells and production wells producing under pressure.

· (1) FINAL WORST CASE VOLUME: 4 ____ GAL

4All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

· (2) Do not proceed further.

Attachments to Appendix D

Attachment D-I-Methods to Calculate Production Volumes for Production Facilities With Exploratory Wells or Production Wells Producing Under Pressure

1.0 ____ Introduction

The owner or operator of a production facility with exploratory wells or production wells producing under pressure shall compare the well rate of the highest output well (rate of well), in barrels per day, to the ability of response equipment and personnel to recover the volume of oil that could be discharged (rate of recovery), in barrels per day. The result of this comparison will determine the method used to calculate the production volume for the production facility. This production volume is to be used to calculate the worst case discharge planning volume in part B of this appendix.

2.0 ____ Description of Methods

2.1 ____ Method A

If the well rate would overwhelm the response efforts (i.e., rate of well/rate of recovery ≥ 1), then the production volume would be the 30-day forecasted well rate for a well 10,000 feet deep or less, or the 45-day forecasted well rate for a well deeper than 10,000 feet.

- (1) For wells 10,000 feet deep or less:

Production volume=30 days \times rate of well.

- (2) For wells deeper than 10,000 feet:

Production volume=45 days \times rate of well.

2.2 ____ Method B

2.2.1 ____ If the rate of recovery would be greater than the well rate (i.e., rate of well/rate of recovery < 1), then the production volume would equal the sum of two terms:

Production volume=discharge volume1 + discharge volume2

2.2.2 ____ The first term represents the volume of the oil discharged from the well between the time of the blowout and the time the response resources are on scene and recovering oil (discharge volume1).

Discharge volume1=(days unattended+days to respond) \times (rate of well)

2.2.3 ____ The second term represents the volume of oil discharged from the well after the response resources begin operating until the discharge is stopped, adjusted for the recovery rate of the response resources (discharge volume2).

- (1) For wells 10,000 feet deep or less:

Discharge volume2=[30 days-(days unattended + days to respond)] \times (rate of well) \times (rate of well/rate of recovery)

- (2) For wells deeper than 10,000 feet:

Discharge volume2=[45 days-(days unattended + days to respond)] \times (rate of well) \times (rate of well/rate of recovery)

3.0____Example

3.1____A facility consists of two production wells producing under pressure, which are both less than 10,000 feet deep. The well rate of well A is 5 barrels per day, and the well rate of well B is 10 barrels per day. The facility is unattended for a maximum of 7 days. The facility operator estimates that it will take 2 days to have response equipment and personnel on scene and responding to a blowout, and that the projected rate of recovery will be 20 barrels per day.

- (1) First, the facility operator determines that the highest output well is well B. The facility operator calculates the ratio of the rate of well to the rate of recovery:

$10 \text{ barrels per day} / 20 \text{ barrels per day} = 0.5$ Because the ratio is less than one, the facility operator will use Method B to calculate the production volume.

- (2) The first term of the equation is:

$\text{Discharge volume}_1 = (7 \text{ days} + 2 \text{ days}) \times (10 \text{ barrels per day}) = 90 \text{ barrels}$

- (3) The second term of the equation is:

$\text{Discharge volume}_2 = [30 \text{ days} - (7 \text{ days} + 2 \text{ days})] \times (10 \text{ barrels per day}) \times (0.5) = 105 \text{ barrels}$

- (4) Therefore, the production volume is:

$\text{Production volume} = 90 \text{ barrels} + 105 \text{ barrels} = 195 \text{ barrels}$

3.2____If the recovery rate was 5 barrels per day, the ratio of rate of well to rate of recovery would be 2, so the facility operator would use Method A. The production volume would have been:

$30 \text{ days} \times 10 \text{ barrels per day} = 300 \text{ barrels}$

[59 FR 34110, July 1, 1994; 59 FR 49006, Sept. 26, 1994, as amended at 65 FR 40800, June 30, 2000; 67 FR 47152, July 17, 2002]

Appendix E - Determination and Evaluation of Required Response Resources for Facility Response Plans

1.0____Purpose and Definitions

1.1____The purpose of this appendix is to describe the procedures to identify response resources to

meet the requirements of §112.20. To identify response resources to meet the facility response plan requirements of 40 CFR 112.20(h), owners or operators shall follow this appendix or, where not appropriate, shall clearly demonstrate in the response plan why use of this appendix is not appropriate at the facility and make comparable arrangements for response resources.

1.2 Definitions.

1.2.1 *Animal fat* means a non-petroleum oil, fat, or grease of animal, fish, or marine mammal origin. Animal fats are further classified based on specific gravity as follows:

- (1) Group A-specific gravity less than 0.8.
- (2) Group B-specific gravity equal to or greater than 0.8 and less than 1.0.
- (3) Group C-specific gravity equal to or greater than 1.0.

1.2.2 *Nearshore* is an operating area defined as extending seaward 12 miles from the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending 12 miles from the line of demarcation (COLREG lines) defined in 49 CFR 80.740 and 80.850.

1.2.3 *Non-persistent oils* or *Group 1 oils* include:

- (1) A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:
 - (A) At least 50 percent of which by volume, distill at a temperature of 340 degrees C (645 degrees F); and
 - (B) At least 95 percent of which by volume, distill at a temperature of 370 degrees C (700 degrees F); and
- (2) A non-petroleum oil, other than an animal fat or vegetable oil, with a specific gravity less than 0.8.

1.2.4 *Non-petroleum oil* means oil of any kind that is not petroleum-based, including but not limited to: fats, oils, and greases of animal, fish, or marine mammal origin; and vegetable oils, including oils from seeds, nuts, fruits, and kernels.

1.2.5 *Ocean* means the nearshore area.

1.2.6 *Operating area* means Rivers and Canals, Inland, Nearshore, and Great Lakes geographic location(s) in which a facility is handling, storing, or transporting oil.

1.2.7 *Operating environment* means Rivers and Canals, Inland, Great Lakes, or Ocean. These terms are used to define the conditions in which response equipment is designed to function.

1.2.8 *Persistent oils* include:

- (1) A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil.

Persistent oils are further classified based on specific gravity as follows:

- (A) Group 2-specific gravity less than 0.85;
- (B) Group 3-specific gravity equal to or greater than 0.85 and less than 0.95;
- (C) Group 4-specific gravity equal to or greater than 0.95 and less than 1.0; or
- (D) Group 5-specific gravity equal to or greater than 1.0.

· (2) A non-petroleum oil, other than an animal fat or vegetable oil, with a specific gravity of 0.8 or greater. These oils are further classified based on specific gravity as follows:

- (A) Group 2-specific gravity equal to or greater than 0.8 and less than 0.85;
- (B) Group 3-specific gravity equal to or greater than 0.85 and less than 0.95;
- (C) Group 4-specific gravity equal to or greater than 0.95 and less than 1.0; or
- (D) Group 5-specific gravity equal to or greater than 1.0.

1.2.9 ____ *Vegetable oil* means a non-petroleum oil or fat of vegetable origin, including but not limited to oils and fats derived from plant seeds, nuts, fruits, and kernels. Vegetable oils are further classified based on specific gravity as follows:

- (1) Group A-specific gravity less than 0.8.
- (2) Group B-specific gravity equal to or greater than 0.8 and less than 1.0.
- (3) Group C-specific gravity equal to or greater than 1.0.

1.2.10 Other definitions are included in §112.2, section 1.1 of Appendix C, and section 3.0 of Appendix F.

2.0 ____ Equipment Operability and Readiness

2.1 ____ All equipment identified in a response plan must be designed to operate in the conditions expected in the facility's geographic area (i.e., operating environment). These conditions vary widely based on location and season. Therefore, it is difficult to identify a single stockpile of response equipment that will function effectively in each geographic location (i.e., operating area).

2.2 ____ Facilities handling, storing, or transporting oil in more than one operating environment as indicated in Table 1 of this appendix must identify equipment capable of successfully functioning in each operating environment.

2.3 ____ When identifying equipment for the response plan (based on the use of this appendix), a facility owner or operator must consider the inherent limitations of the operability of equipment components and response systems. The criteria in Table 1 of this appendix shall be used to evaluate the

operability in a given environment. These criteria reflect the general conditions in certain operating environments.

2.3.1 ____ The Regional Administrator may require documentation that the boom identified in a facility response plan meets the criteria in Table 1 of this appendix. Absent acceptable documentation, the Regional Administrator may require that the boom be tested to demonstrate that it meets the criteria in Table 1 of this appendix. Testing must be in accordance with ASTM F 715, ASTM F 989, or other tests approved by EPA as deemed appropriate (see Appendix E to this part, section 13, for general availability of documents).

2.4 ____ Table 1 of this appendix lists criteria for oil recovery devices and boom. All other equipment necessary to sustain or support response operations in an operating environment must be designed to function in the same conditions. For example, boats that deploy or support skimmers or boom must be capable of being safely operated in the significant wave heights listed for the applicable operating environment.

2.5 ____ A facility owner or operator shall refer to the applicable Area Contingency Plan (ACP), where available, to determine if ice, debris, and weather-related visibility are significant factors to evaluate the operability of equipment. The ACP may also identify the average temperature ranges expected in the facility's operating area. All equipment identified in a response plan must be designed to operate within those conditions or ranges.

2.6 ____ This appendix provides information on response resource mobilization and response times. The distance of the facility from the storage location of the response resources must be used to determine whether the resources can arrive on-scene within the stated time. A facility owner or operator shall include the time for notification, mobilization, and travel of resources identified to meet the medium and Tier 1 worst case discharge requirements identified in sections 4.3 and 9.3 of this appendix (for medium discharges) and section 5.3 of this appendix (for worst case discharges). The facility owner or operator must plan for notification and mobilization of Tier 2 and 3 response resources as necessary to meet the requirements for arrival on-scene in accordance with section 5.3 of this appendix. An on-water speed of 5 knots and a land speed of 35 miles per hour is assumed, unless the facility owner or operator can demonstrate otherwise.

2.7 ____ In identifying equipment, the facility owner or operator shall list the storage location, quantity, and manufacturer's make and model. For oil recovery devices, the effective daily recovery capacity, as determined using section 6 of this appendix, must be included. For boom, the overall boom height (draft and freeboard) shall be included. A facility owner or operator is responsible for ensuring that the identified boom has compatible connectors.

3.0 ____ Determining Response Resources Required for Small Discharges-Petroleum Oils and Non-Petroleum Oils Other Than Animal Fats and Vegetable Oils

3.1 ____ A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in § 112.2, to respond to a small discharge. A small discharge is defined as any discharge volume less than or equal to 2,100 gallons, but not to exceed the calculated worst case discharge. The equipment must be designed to function in the operating environment at the point of expected use.

3.2 ____ Complexes that are regulated by EPA and the United States Coast Guard (USCG) must also

consider planning quantities for the transportation-related transfer portion of the facility.

3.2.1 *Petroleum oils.* The USCG planning level that corresponds to EPA's "small discharge" is termed "the average most probable discharge." A USCG rule found at 33 CFR 154.1020 defines "the average most probable discharge" as the lesser of 50 barrels (2,100 gallons) or 1 percent of the volume of the worst case discharge. Owners or operators of complexes that handle, store, or transport petroleum oils must compare oil discharge volumes for a small discharge and an average most probable discharge, and plan for whichever quantity is greater.

3.2.2 *Non-petroleum oils other than animal fats and vegetable oils.* Owners or operators of complexes that handle, store, or transport non-petroleum oils other than animal fats and vegetable oils must plan for oil discharge volumes for a small discharge. There is no USCG planning level that directly corresponds to EPA's "small discharge." However, the USCG (at 33 CFR 154.545) has requirements to identify equipment to contain oil resulting from an operational discharge.

3.3 The response resources shall, as appropriate, include:

3.3.1 One thousand feet of containment boom (or, for complexes with marine transfer components, 1,000 feet of containment boom or two times the length of the largest vessel that regularly conducts oil transfers to or from the facility, whichever is greater), and a means of deploying it within 1 hour of the discovery of a discharge;

3.3.2 Oil recovery devices with an effective daily recovery capacity equal to the amount of oil discharged in a small discharge or greater which is available at the facility within 2 hours of the detection of an oil discharge; and

3.3.3 Oil storage capacity for recovered oily material indicated in section 12.2 of this appendix.

4.0 Determining Response Resources Required for Medium Discharges-Petroleum Oils and Non-Petroleum Oils Other Than Animal Fats and Vegetable Oils

4.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in § 112.2, to respond to a medium discharge of oil for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

4.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the transportation-related transfer portion of the facility.

4.2.1 *Petroleum oils.* The USCG planning level that corresponds to EPA's "medium discharge" is termed "the maximum most probable discharge." The USCG rule found at 33 CFR part 154 defines "the maximum most probable discharge" as a discharge of 1,200 barrels (50,400 gallons) or 10 percent of the worst case discharge, whichever is less. Owners or operators of complexes that handle, store, or transport petroleum oils must compare calculated discharge volumes for a medium discharge and a maximum most probable discharge, and plan for whichever quantity is greater.

4.2.2 *Non-petroleum oils other than animal fats and vegetable oils.* Owners or operators of complexes that handle, store, or transport non-petroleum oils other than animal fats and vegetable oils

must plan for oil discharge volumes for a medium discharge. For non-petroleum oils, there is no USCG planning level that directly corresponds to EPA's "medium discharge."

4.3 ____ Oil recovery devices identified to meet the applicable medium discharge volume planning criteria must be located such that they are capable of arriving on-scene within 6 hours in higher volume port areas and the Great Lakes and within 12 hours in all other areas. Higher volume port areas and Great Lakes areas are defined in section 1.1 of Appendix C to this part.

4.4 ____ Because rapid control, containment, and removal of oil are critical to reduce discharge impact, the owner or operator must determine response resources using an effective daily recovery capacity for oil recovery devices equal to 50 percent of the planning volume applicable for the facility as determined in section 4.1 of this appendix. The effective daily recovery capacity for oil recovery devices identified in the plan must be determined using the criteria in section 6 of this appendix.

4.5 ____ In addition to oil recovery capacity, the plan shall, as appropriate, identify sufficient quantity of containment boom available, by contract or other approved means as described in §112.2, to arrive within the required response times for oil collection and containment and for protection of fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 13, for availability) and the applicable ACP. Although 40 CFR part 112 does not set required quantities of boom for oil collection and containment, the response plan shall identify and ensure, by contract or other approved means as described in §112.2, the availability of the quantity of boom identified in the plan for this purpose.

4.6 ____ The plan must indicate the availability of temporary storage capacity to meet section 12.2 of this appendix. If available storage capacity is insufficient to meet this level, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

4.7 ____ The following is an example of a medium discharge volume planning calculation for equipment identification in a higher volume port area: The facility's largest aboveground storage tank volume is 840,000 gallons. Ten percent of this capacity is 84,000 gallons. Because 10 percent of the facility's largest tank, or 84,000 gallons, is greater than 36,000 gallons, 36,000 gallons is used as the planning volume. The effective daily recovery capacity is 50 percent of the planning volume, or 18,000 gallons per day. The ability of oil recovery devices to meet this capacity must be calculated using the procedures in section 6 of this appendix. Temporary storage capacity available on-scene must equal twice the daily recovery capacity as indicated in section 12.2 of this appendix, or 36,000 gallons per day. This is the information the facility owner or operator must use to identify and ensure the availability of the required response resources, by contract or other approved means as described in §112.2. The facility owner shall also identify how much boom is available for use.

5.0 ____ Determining Response Resources Required for the Worst Case Discharge to the Maximum Extent Practicable

5.1 ____ A facility owner or operator shall identify and ensure the availability of, by contract or other approved means as described in §112.2, sufficient response resources to respond to the worst case discharge of oil to the maximum extent practicable. Sections 7 and 10 of this appendix describe the method to determine the necessary response resources. Worksheets are provided as Attachments E-1 and E-2 at the end of this appendix to simplify the procedures involved in calculating the planning

volume for response resources for the worst case discharge.

5.1____ A facility owner or operator shall identify and ensure the availability of, by contract or other approved means as described in §112.2, sufficient response resources to respond to the worst case discharge of oil to the maximum extent practicable. Sections 7 and 10 of this appendix describe the method to determine the necessary response resources. Worksheets are provided as Attachments E-1 and E-2 at the end of this appendix to simplify the procedures involved in calculating the planning volume for response resources for the worst case discharge.

5.2____ Complexes that are regulated by EPA and the USCG must also consider planning for the worst case discharge at the transportation-related portion of the facility. The USCG requires that transportation-related facility owners or operators use a different calculation for the worst case discharge in the revisions to 33 CFR part 154. Owners or operators of complex facilities that are regulated by EPA and the USCG must compare both calculations of worst case discharge derived by EPA and the USCG and plan for whichever volume is greater.

5.3____ Oil discharge response resources identified in the response plan and available, by contract or other approved means as described in §112.2, to meet the applicable worst case discharge planning volume must be located such that they are capable of arriving at the scene of a discharge within the times specified for the applicable response tier listed as follows

	Tier 1 hours
Higher volume port areas.....	
Great Lakes.....	
All other river and canal, inland, and nearshore areas.....	

The three levels of response tiers apply to the amount of time in which facility owners or operators must plan for response resources to arrive at the scene of a discharge to respond to the worst case discharge planning volume. For example, at a worst case discharge in an inland area, the first tier of response resources (*i.e.*, that amount of on-water and shoreline cleanup capacity necessary to respond to the fraction of the worst case discharge as indicated through the series of steps described in sections 7.2 and 7.3 or sections 10.2 and 10.3 of this appendix) would arrive at the scene of the discharge within 12 hours; the second tier of response resources would arrive within 36 hours; and the third tier of response resources would arrive within 60 hours.

5.4____ The effective daily recovery capacity for oil recovery devices identified in the response plan must be determined using the criteria in section 6 of this appendix. A facility owner or operator shall identify the storage locations of all response resources used for each tier. The owner or operator of a facility whose required daily recovery capacity exceeds the applicable contracting caps in Table 5 of this appendix shall, as appropriate, identify sources of additional equipment, their location, and the arrangements made to obtain this equipment during a response. The owner or operator of a facility whose calculated planning volume exceeds the applicable contracting caps in Table 5 of this appendix shall, as appropriate, identify sources of additional equipment equal to twice the cap listed in Tier 3 or the amount necessary to reach the calculated planning volume, whichever is lower. The resources identified above the cap shall be capable of arriving on-scene not later than the Tier 3 response times in section 5.3 of this appendix. No contract is required. While general listings of available response

equipment may be used to identify additional sources (i.e., “public” resources vs. “private” resources), the response plan shall identify the specific sources, locations, and quantities of equipment that a facility owner or operator has considered in his or her planning. When listing USCG-classified oil spill removal organization(s) that have sufficient removal capacity to recover the volume above the response capacity cap for the specific facility, as specified in Table 5 of this appendix, it is not necessary to list specific quantities of equipment.

5.5 ____ A facility owner or operator shall identify the availability of temporary storage capacity to meet section 12.2 of this appendix. If available storage capacity is insufficient, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

5.6 ____ When selecting response resources necessary to meet the response plan requirements, the facility owner or operator shall, as appropriate, ensure that a portion of those resources is capable of being used in close-to-shore response activities in shallow water. For any EPA-regulated facility that is required to plan for response in shallow water, at least 20 percent of the on-water response equipment identified for the applicable operating area shall, as appropriate, be capable of operating in water of 6 feet or less depth.

5.7 ____ In addition to oil spill recovery devices, a facility owner or operator shall identify sufficient quantities of boom that are available, by contract or other approved means as described in §112.2, to arrive on-scene within the specified response times for oil containment and collection. The specific quantity of boom required for collection and containment will depend on the facility-specific information and response strategies employed. A facility owner or operator shall, as appropriate, also identify sufficient quantities of oil containment boom to protect fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's “Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments” (see Appendix E to this part, section 13, for availability), and the applicable ACP. Refer to this guidance document for the number of days and geographic areas (*i.e.*, operating environments) specified in Table 2 and Table 6 of this appendix.

5.8 ____ A facility owner or operator shall also identify, by contract or other approved means as described in §112.2, the availability of an oil spill removal organization(s) (as described in §112.2) capable of responding to a shoreline cleanup operation involving the calculated volume of oil and emulsified oil that might impact the affected shoreline. The volume of oil that shall, as appropriate, be planned for is calculated through the application of factors contained in Tables 2, 3, 6, and 7 of this appendix. The volume calculated from these tables is intended to assist the facility owner or operator to identify an oil spill removal organization with sufficient resources and expertise.

6.0 ____ Determining Effective Daily Recovery Capacity for Oil Recovery Devices

6.1 ____ Oil recovery devices identified by a facility owner or operator must be identified by the manufacturer, model, and effective daily recovery capacity. These capacities must be used to determine whether there is sufficient capacity to meet the applicable planning criteria for a small discharge, a medium discharge, and a worst case discharge to the maximum extent practicable.

6.2 ____ To determine the effective daily recovery capacity of oil recovery devices, the formula listed in section 6.2.1 of this appendix shall be used. This formula considers potential limitations due to available daylight, weather, sea state, and percentage of emulsified oil in the recovered material. The RA may assign a lower efficiency factor to equipment listed in a response plan if it is determined that

such a reduction is warranted.

6.2.1 ____ The following formula shall be used to calculate the effective daily recovery capacity:

$$R = T \times 24 \text{ hours} \times E$$

where:

R-Effective daily recovery capacity;

T-Throughput rate in barrels per hour (nameplate capacity); and

E-20 percent efficiency factor (or lower factor as determined by the Regional Administrator).

6.2.2 ____ For those devices in which the pump limits the throughput of liquid, throughput rate shall be calculated using the pump capacity.

6.2.3 ____ For belt or mop type devices, the throughput rate shall be calculated using the speed of the belt or mop through the device, assumed thickness of oil adhering to or collected by the device, and surface area of the belt or mop. For purposes of this calculation, the assumed thickness of oil will be 1/4 inch.

6.2.4 ____ Facility owners or operators that include oil recovery devices whose throughput is not measurable using a pump capacity or belt/mop speed may provide information to support an alternative method of calculation. This information must be submitted following the procedures in section 6.3.2 of this appendix.

6.3 ____ As an alternative to section 6.2 of this appendix, a facility owner or operator may submit adequate evidence that a different effective daily recovery capacity should be applied for a specific oil recovery device. Adequate evidence is actual verified performance data in discharge conditions or tests using American Society of Testing and Materials (ASTM) Standard F 631-99, F 808-83 (1999), or an equivalent test approved by EPA as deemed appropriate (see Appendix E to this part, section 13, for general availability of documents).

6.3.1 ____ The following formula must be used to calculate the effective daily recovery capacity under this alternative:

$$R = D \times U$$

where:

R-Effective daily recovery capacity;

D-Average Oil Recovery Rate in barrels per hour (Item 26 in F 808-83; Item 13.2.16 in F 631-99; or actual performance data); and

U-Hours per day that equipment can operate under discharge conditions. Ten hours per day must be used unless a facility owner or operator can demonstrate that the recovery operation can be sustained for longer periods.

6.3.2 ____ A facility owner or operator submitting a response plan shall provide data that supports the effective daily recovery capacities for the oil recovery devices listed. The following is an example of these calculations:

- (1) A weir skimmer identified in a response plan has a manufacturer's rated throughput at the pump of 267 gallons per minute (gpm).

267 gpm=381 barrels per hour (bph)

$R=381 \text{ bph} \times 24 \text{ hr/day} \times 0.2=1,829 \text{ barrels per day}$

- (2) After testing using ASTM procedures, the skimmer's oil recovery rate is determined to be 220 gpm. The facility owner or operator identifies sufficient resources available to support operations for 12 hours per day.

220 gpm=314 bph

$R=314 \text{ bph} \times 12 \text{ hr/day}=3,768 \text{ barrels per day}$

- (3) The facility owner or operator will be able to use the higher capacity if sufficient temporary oil storage capacity is available. Determination of alternative efficiency factors under section 6.2 of this appendix or the acceptability of an alternative effective daily recovery capacity under section 6.3 of this appendix will be made by the Regional Administrator as deemed appropriate.

7.0 ____ Calculating Planning Volumes for a Worst Case Discharge-Petroleum Oils and Non-Petroleum Oils Other Than Animal Fats and Vegetable Oils

7.1 ____ A facility owner or operator shall plan for a response to the facility's worst case discharge. The planning for on-water oil recovery must take into account a loss of some oil to the environment due to evaporative and natural dissipation, potential increases in volume due to emulsification, and the potential for deposition of oil on the shoreline. The procedures for non-petroleum oils other than animal fats and vegetable oils are discussed in section 7.7 of this appendix.

7.2 ____ The following procedures must be used by a facility owner or operator in determining the required on-water oil recovery capacity:

7.2.1 ____ The following must be determined: the worst case discharge volume of oil in the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility [persistent (Groups 2, 3, 4, 5) or non-persistent (Group 1)]; and the facility's specific operating area. See sections 1.2.3 and 1.2.8 of this appendix for the definitions of non-persistent and persistent oils, respectively. Facilities that handle, store, or transport oil from different oil groups must calculate each group separately, unless the oil group constitutes 10 percent or less by volume of the facility's total oil storage capacity. This information is to be used with Table 2 of this appendix to determine the percentages of the total volume to be used for removal capacity planning. Table 2 of this appendix divides the volume into three categories: oil lost to the environment; oil deposited on the shoreline; and oil available for on-water recovery.

7.2.2 ____ The on-water oil recovery volume shall, as appropriate, be adjusted using the appropriate emulsification factor found in Table 3 of this appendix. Facilities that handle, store, or transport oil from different petroleum groups must compare the on-water recovery volume for each oil group (unless the oil group constitutes 10 percent or less by volume of the facility's total storage capacity) and use the calculation that results in the largest on-water oil recovery volume to plan for the amount of response resources for a worst case discharge.

7.2.3 ____ The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 4 of this appendix from the appropriate operating area and response tier to determine the total on-water oil recovery capacity in barrels per day that must be identified or contracted to arrive on-scene within the applicable time for each response tier. Three tiers are specified. For higher volume port areas, the contracted tiers of resources must be located such that they are capable of arriving on-scene within 6 hours for Tier 1, 30 hours for Tier 2, and 54 hours for Tier 3 of the discovery of an oil discharge. For all other rivers and canals, inland, nearshore areas, and the Great Lakes, these tiers are 12, 36, and 60 hours.

7.2.4 ____ The resulting on-water oil recovery capacity in barrels per day for each tier is used to identify response resources necessary to sustain operations in the applicable operating area. The equipment shall be capable of sustaining operations for the time period specified in Table 2 of this appendix. The facility owner or operator shall identify and ensure the availability, by contract or other approved means as described in § 112.2, of sufficient oil spill recovery devices to provide the effective daily oil recovery capacity required. If the required capacity exceeds the applicable cap specified in Table 5 of this appendix, then a facility owner or operator shall ensure, by contract or other approved means as described in § 112.2, only for the quantity of resources required to meet the cap, but shall identify sources of additional resources as indicated in section 5.4 of this appendix. The owner or operator of a facility whose planning volume exceeded the cap in 1993 must make arrangements to identify and ensure the availability, by contract or other approved means as described in § 112.2, for additional capacity to be under contract by 1998 or 2003, as appropriate. For a facility that handles multiple groups of oil, the required effective daily recovery capacity for each oil group is calculated before applying the cap. The oil group calculation resulting in the largest on-water recovery volume must be used to plan for the amount of response resources for a worst case discharge, unless the oil group comprises 10 percent or less by volume of the facility's total oil storage capacity.

7.3 ____ The procedures discussed in sections 7.3.1-7.3.3 of this appendix must be used to calculate the planning volume for identifying shoreline cleanup capacity (for Group 1 through Group 4 oils).

7.3.1 ____ The following must be determined: the worst case discharge volume of oil for the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility [persistent (Groups 2, 3, or 4) or non-persistent (Group 1)]; and the geographic area(s) in which the facility

operates (*i.e.*, operating areas). For a facility handling, storing, or transporting oil from different groups, each group must be calculated separately. Using this information, Table 2 of this appendix must be used to determine the percentages of the total volume to be used for shoreline cleanup resource planning.

7.3.2___ The shoreline cleanup planning volume must be adjusted to reflect an emulsification factor using the same procedure as described in section 7.2.2 of this appendix.

7.3.3___ The resulting volume shall be used to identify an oil spill removal organization with the appropriate shoreline cleanup capability.

7.4___ A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group 1 through Group 4 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The facility owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for Group 1 through Group 4 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

7.5___ The following is an example of the procedure described above in sections 7.2 and 7.3 of this appendix: A facility with a 270,000 barrel (11.3 million gallons) capacity for #6 oil (specific gravity 0.96) is located in a higher volume port area. The facility is on a peninsula and has docks on both the ocean and bay sides. The facility has four aboveground oil storage tanks with a combined total capacity of 80,000 barrels (3.36 million gallons) and no secondary containment. The remaining facility tanks are inside secondary containment structures. The largest aboveground oil storage tank (90,000 barrels or 3.78 million gallons) has its own secondary containment. Two 50,000 barrel (2.1 million gallon) tanks (that are not connected by a manifold) are within a common secondary containment tank area, which is capable of holding 100,000 barrels (4.2 million gallons) plus sufficient freeboard.

7.5.1___ The worst case discharge for the facility is calculated by adding the capacity of all aboveground oil storage tanks without secondary containment (80,000 barrels) plus the capacity of the largest aboveground oil storage tank inside secondary containment. The resulting worst case discharge volume is 170,000 barrels or 7.14 million gallons.

7.5.2___ Because the requirements for Tiers 1, 2, and 3 for inland and nearshore exceed the caps identified in Table 5 of this appendix, the facility owner will contract for a response to 10,000 barrels per day (bpd) for Tier 1, 20,000 bpd for Tier 2, and 40,000 bpd for Tier 3. Resources for the remaining 7,850 bpd for Tier 1, 9,750 bpd for Tier 2, and 7,600 bpd for Tier 3 shall be identified but need not be contracted for in advance. The facility owner or operator shall, as appropriate, also identify or contract for quantities of boom identified in their response plan for the protection of fish and wildlife and sensitive environments within the area potentially impacted by a worst case discharge from the facility. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments," (see Appendix E to this part, section 13, for availability) and the applicable ACP. Attachment C-III to Appendix C provides a method for calculating a planning distance to fish and wildlife and sensitive environments and public drinking water intakes that may be impacted in the event of a worst case discharge.

7.6____ The procedures discussed in sections 7.6.1-7.6.3 of this appendix must be used to determine appropriate response resources for facilities with Group 5 oils.

7.6.1____ The owner or operator of a facility that handles, stores, or transports Group 5 oils shall, as appropriate, identify the response resources available by contract or other approved means, as described in §112.2. The equipment identified in a response plan shall, as appropriate, include:

- (1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;
- (2) Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom;
- (3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline;
- (4) Equipment necessary to assess the impact of such discharges; and
- (5) Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored,, or transported.

7.6.2____ Response resources identified in a response plan for a facility that handles, stores, or transports Group 5 oils under section 7.6.1 of this appendix shall be capable of being deployed (on site) within 24 hours of discovery of a discharge to the area where the facility is operating.

7.6.3____ A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group 5 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The facility owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan shall also identify an individual located at the facility to work with the fire department for Group 5 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

7.7____ *Non-petroleum oils other than animal fats and vegetable oils.* The procedures described in sections 7.7.1 through 7.7.5 of this appendix must be used to determine appropriate response plan development and evaluation criteria for facilities that handle, store, or transport non-petroleum oils other than animal fats and vegetable oils. Refer to section 11 of this appendix for information on the limitations on the use of chemical agents for inland and nearshore areas.

7.7.1____ An owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils must provide information in his or her plan that identifies:

- (1) Procedures and strategies for responding to a worst case discharge to the maximum extent practicable; and
- (2) Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

7.7.2____ An owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils must ensure that any equipment identified in a response plan is capable of operating in the conditions expected in the geographic area(s) (*i.e.*, operating environments) in which the facility operates using the criteria in Table 1 of this appendix. When evaluating the operability of equipment, the facility owner or operator must consider limitations that are identified in the appropriate ACPs, including:

- (1) Ice conditions;
- (2) Debris;
- (3) Temperature ranges; and
- (4) Weather-related visibility.

7.7.3____ The owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils must identify the response resources that are available by contract or other approved means, as described in §112.2. The equipment described in the response plan shall, as appropriate, include:

- (1) Containment boom, sorbent boom, or other methods for containing oil floating on the surface or to protect shorelines from impact;
- (2) Oil recovery devices appropriate for the type of non-petroleum oil carried; and
- (3) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

7.7.4____ Response resources identified in a response plan according to section 7.7.3 of this appendix must be capable of commencing an effective on-scene response within the applicable tier response times in section 5.3 of this appendix.

7.7.5____ A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for fires of these oils. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

8.0____ Determining Response Resources Required for Small Discharges-Animal Fats and Vegetable Oils

8.1____ A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a small discharge of animal fats or vegetable oils. A small discharge is defined as any discharge volume less than or equal to 2,100

gallons, but not to exceed the calculated worst case discharge. The equipment must be designed to function in the operating environment at the point of expected use.

8.2___ Complexes that are regulated by EPA and the USCG must also consider planning quantities for the marine transportation-related portion of the facility.

8.2.1___ The USCG planning level that corresponds to EPA's "small discharge" is termed "the average most probable discharge." A USCG rule found at 33 CFR 154.1020 defines "the average most probable discharge" as the lesser of 50 barrels (2,100 gallons) or 1 percent of the volume of the worst case discharge. Owners or operators of complexes that handle, store, or transport animal fats and vegetable oils must compare oil discharge volumes for a small discharge and an average most probable discharge, and plan for whichever quantity is greater.

8.3___ The response resources shall, as appropriate, include:

8.3.1___ One thousand feet of containment boom (or, for complexes with marine transfer components, 1,000 feet of containment boom or two times the length of the largest vessel that regularly conducts oil transfers to or from the facility, whichever is greater), and a means of deploying it within 1 hour of the discovery of a discharge;

8.3.2___ Oil recovery devices with an effective daily recovery capacity equal to the amount of oil discharged in a small discharge or greater which is available at the facility within 2 hours of the detection of a discharge; and

8.3.3___ Oil storage capacity for recovered oily material indicated in section 12.2 of this appendix.

9.0___ Determining Response Resources Required for Medium Discharges-Animal Fats and Vegetable Oils

9.1___ A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a medium discharge of animal fats or vegetable oils for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

9.2___ Complexes that are regulated by EPA and the USCG must also consider planning quantities for the transportation-related transfer portion of the facility. Owners or operators of complexes that handle, store, or transport animal fats or vegetable oils must plan for oil discharge volumes for a medium discharge. For non-petroleum oils, there is no USCG planning level that directly corresponds to EPA's "medium discharge." Although the USCG does not have planning requirements for medium discharges, they do have requirements (at 33 CFR 154.545) to identify equipment to contain oil resulting from an operational discharge.

9.3___ Oil recovery devices identified to meet the applicable medium discharge volume planning criteria must be located such that they are capable of arriving on-scene within 6 hours in higher volume port areas and the Great Lakes and within 12 hours in all other areas. Higher volume port areas and Great Lakes areas are defined in section 1.1 of Appendix C to this part.

9.4 ____ Because rapid control, containment, and removal of oil are critical to reduce discharge impact, the owner or operator must determine response resources using an effective daily recovery capacity for oil recovery devices equal to 50 percent of the planning volume applicable for the facility as determined in section 9.1 of this appendix. The effective daily recovery capacity for oil recovery devices identified in the plan must be determined using the criteria in section 6 of this appendix.

9.5 ____ In addition to oil recovery capacity, the plan shall, as appropriate, identify sufficient quantity of containment boom available, by contract or other approved means as described in §112.2, to arrive within the required response times for oil collection and containment and for protection of fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713-22, March 29, 1994) and the applicable ACP. Although 40 CFR part 112 does not set required quantities of boom for oil collection and containment, the response plan shall identify and ensure, by contract or other approved means as described in §112.2, the availability of the quantity of boom identified in the plan for this purpose.

9.6 ____ The plan must indicate the availability of temporary storage capacity to meet section 12.2 of this appendix. If available storage capacity is insufficient to meet this level, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

9.7 ____ The following is an example of a medium discharge volume planning calculation for equipment identification in a higher volume port area:

The facility's largest aboveground storage tank volume is 840,000 gallons. Ten percent of this capacity is 84,000 gallons. Because 10 percent of the facility's largest tank, or 84,000 gallons, is greater than 36,000 gallons, 36,000 gallons is used as the planning volume. The effective daily recovery capacity is 50 percent of the planning volume, or 18,000 gallons per day. The ability of oil recovery devices to meet this capacity must be calculated using the procedures in section 6 of this appendix. Temporary storage capacity available on-scene must equal twice the daily recovery capacity as indicated in section 12.2 of this appendix, or 36,000 gallons per day. This is the information the facility owner or operator must use to identify and ensure the availability of the required response resources, by contract or other approved means as described in §112.2. The facility owner shall also identify how much boom is available for use.

10.0 ____ Calculating Planning Volumes for a Worst Case Discharge-Animal Fats and Vegetable Oils.

10.1 ____ A facility owner or operator shall plan for a response to the facility's worst case discharge. The planning for on-water oil recovery must take into account a loss of some oil to the environment due to physical, chemical, and biological processes, potential increases in volume due to emulsification, and the potential for deposition of oil on the shoreline or on sediments. The response planning procedures for animal fats and vegetable oils are discussed in section 10.7 of this appendix. You may use alternate response planning procedures for animal fats and vegetable oils if those procedures result in environmental protection equivalent to that provided by the procedures in section 10.7 of this appendix.

10.2 ____ The following procedures must be used by a facility owner or operator in determining the required on-water oil recovery capacity:

10.2.1 ____ The following must be determined: the worst case discharge volume of oil in the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility (Groups A, B, C); and the facility's specific operating area. See sections 1.2.1 and 1.2.9 of this appendix for the definitions of animal fats and vegetable oils and groups thereof. Facilities that handle, store, or transport oil from different oil groups must calculate each group separately, unless the oil group constitutes 10 percent or less by volume of the facility's total oil storage capacity. This information is to be used with Table 6 of this appendix to determine the percentages of the total volume to be used for removal capacity planning. Table 6 of this appendix divides the volume into three categories: oil lost to the environment; oil deposited on the shoreline; and oil available for on-water recovery.

10.2.2 ____ The on-water oil recovery volume shall, as appropriate, be adjusted using the appropriate emulsification factor found in Table 7 of this appendix. Facilities that handle, store, or transport oil from different groups must compare the on-water recovery volume for each oil group (unless the oil group constitutes 10 percent or less by volume of the facility's total storage capacity) and use the calculation that results in the largest on-water oil recovery volume to plan for the amount of response resources for a worst case discharge.

10.2.3 ____ The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 4 of this appendix from the appropriate operating area and response tier to determine the total on-water oil recovery capacity in barrels per day that must be identified or contracted to arrive on-scene within the applicable time for each response tier. Three tiers are specified. For higher volume port areas, the contracted tiers of resources must be located such that they are capable of arriving on-scene within 6 hours for Tier 1, 30 hours for Tier 2, and 54 hours for Tier 3 of the discovery of a discharge. For all other rivers and canals, inland, nearshore areas, and the Great Lakes, these tiers are 12, 36, and 60 hours.

10.2.4 ____ The resulting on-water oil recovery capacity in barrels per day for each tier is used to identify response resources necessary to sustain operations in the applicable operating area. The equipment shall be capable of sustaining operations for the time period specified in Table 6 of this appendix. The facility owner or operator shall identify and ensure, by contract or other approved means as described in §112.2, the availability of sufficient oil spill recovery devices to provide the effective daily oil recovery capacity required. If the required capacity exceeds the applicable cap specified in Table 5 of this appendix, then a facility owner or operator shall ensure, by contract or other approved means as described in §112.2, only for the quantity of resources required to meet the cap, but shall identify sources of additional resources as indicated in section 5.4 of this appendix. The owner or operator of a facility whose planning volume exceeded the cap in 1998 must make arrangements to identify and ensure, by contract or other approved means as described in §112.2, the availability of additional capacity to be under contract by 2003, as appropriate. For a facility that handles multiple groups of oil, the required effective daily recovery capacity for each oil group is calculated before applying the cap. The oil group calculation resulting in the largest on-water recovery volume must be used to plan for the amount of response resources for a worst case discharge, unless the oil group comprises 10 percent or less by volume of the facility's oil storage capacity.

10.3 ____ The procedures discussed in sections 10.3.1 through 10.3.3 of this appendix must be used to calculate the planning volume for identifying shoreline cleanup capacity (for Groups A and B oils).

10.3.1 ____ The following must be determined: the worst case discharge volume of oil for the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility (Groups A or B); and the geographic area(s) in which the facility operates (i.e., operating areas). For a facility handling, storing, or transporting oil from different groups, each group must be calculated separately.

Using this information, Table 6 of this appendix must be used to determine the percentages of the total volume to be used for shoreline cleanup resource planning.

10.3.2___ The shoreline cleanup planning volume must be adjusted to reflect an emulsification factor using the same procedure as described in section 10.2.2 of this appendix.

10.3.3___ The resulting volume shall be used to identify an oil spill removal organization with the appropriate shoreline cleanup capability.

10.4___ A response plan must identify response resources with fire fighting capability appropriate for the risk of fire and explosion at the facility from the discharge or threat of discharge of oil. The owner or operator of a facility that handles, stores, or transports Group A or B oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The facility owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual to work with the fire department for Group A or B oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

10.5___ The following is an example of the procedure described in sections 10.2 and 10.3 of this appendix. A facility with a 37.04 million gallon (881,904 barrel) capacity of several types of vegetable oils is located in the Inland Operating Area. The vegetable oil with the highest specific gravity stored at the facility is soybean oil (specific gravity 0.922, Group B vegetable oil). The facility has ten aboveground oil storage tanks with a combined total capacity of 18 million gallons (428,571 barrels) and without secondary containment. The remaining facility tanks are inside secondary containment structures. The largest aboveground oil storage tank (3 million gallons or 71,428 barrels) has its own secondary containment. Two 2.1 million gallon (50,000 barrel) tanks (that are not connected by a manifold) are within a common secondary containment tank area, which is capable of holding 4.2 million gallons (100,000 barrels) plus sufficient freeboard.

10.5.1___ The worst case discharge for the facility is calculated by adding the capacity of all aboveground vegetable oil storage tanks without secondary containment (18.0 million gallons) plus the capacity of the largest aboveground storage tank inside secondary containment (3.0 million gallons). The resulting worst case discharge is 21 million gallons or 500,000 barrels.

10.5.2___ With a specific worst case discharge identified, the planning volume for on-water recovery can be identified as follows:

Worst case discharge: 21 million gallons (500,000 barrels) of Group B vegetable oil

Operating Area: Inland

Planned percent recovered floating vegetable oil (from Table 6, column Nearshore/Inland/Great Lakes): Inland, Group B is 20%

Emulsion factor (from Table 7): 2.0

Planning volumes for on-water recovery: $21,000,000 \text{ gallons} \times 0.2 \times 2.0 = 8,400,000 \text{ gallons}$ or 200,000 barrels.

Determine required resources for on-water recovery for each of the three tiers using mobilization factors (from Table 4, column Inland/Nearshore/Great Lakes)

Inland Operating Area	Tier 1	Tier 2	Tier 3
Mobilization factor by which you multiply planning volume.....	.15	.25	.40
Estimated Daily Recovery Capacity (bbls) ..	30,000	50,000	80,000

10.5.3 ____ Because the requirements for On-Water Recovery Resources for Tiers 1, 2, and 3 for Inland Operating Area exceed the caps identified in Table 5 of this appendix, the facility owner will contract for a response of 12,500 barrels per day (bpd) for Tier 1, 25,000 bpd for Tier 2, and 50,000 bpd for Tier 3. Resources for the remaining 17,500 bpd for Tier 1, 25,000 bpd for Tier 2, and 30,000 bpd for Tier 3 shall be identified but need not be contracted for in advance.

10.5.4 ____ With the specific worst case discharge identified, the planning volume of onshore recovery can be identified as follows:

Worst case discharge: 21 million gallons (500,000 barrels) of Group B vegetable oil

Operating Area: Inland

Planned percent recovered floating vegetable oil from onshore (from Table 6, column Nearshore/Inland/Great Lakes): Inland, Group B is 65%

Emulsion factor (from Table 7): 2.0

Planning volumes for shoreline recovery:

$21,000,000 \text{ gallons} \times 0.65 \times 2.0 = 27,300,000 \text{ gallons}$ or 650,000 barrels

10.5.5 ____ The facility owner or operator shall, as appropriate, also identify or contract for quantities of boom identified in the response plan for the protection of fish and wildlife and sensitive environments within the area potentially impacted by a worst case discharge from the facility. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments," (see Appendix E to this part, section 13, for availability) and the applicable ACP. Attachment C-III to Appendix C provides a method for calculating a planning distance to fish and wildlife and sensitive environments and public drinking water intakes that may be adversely affected in the event of a worst case discharge.

10.6____ The procedures discussed in sections 10.6.1 through 10.6.3 of this appendix must be used to determine appropriate response resources for facilities with Group C oils.

10.6.1____ The owner or operator of a facility that handles, stores, or transports Group C oils shall, as appropriate, identify the response resources available by contract or other approved means, as described in §112.2. The equipment identified in a response plan shall, as appropriate, include:

- (1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;
- (2) Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom;
- (3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline;
- (4) Equipment necessary to assess the impact of such discharges; and
- (5) Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored, or transported.

10.6.2____ Response resources identified in a response plan for a facility that handles, stores, or transports Group C oils under section 10.6.1 of this appendix shall be capable of being deployed on scene within 24 hours of discovery of a discharge.

10.6.3____ A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group C oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan shall also identify an individual located at the facility to work with the fire department for Group C oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

10.7____ The procedures described in sections 10.7.1 through 10.7.5 of this appendix must be used to determine appropriate response plan development and evaluation criteria for facilities that handle, store, or transport animal fats and vegetable oils. Refer to section 11 of this appendix for information on the limitations on the use of chemical agents for inland and nearshore areas.

10.7.1____ An owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must provide information in the response plan that identifies:

- (1)____ Procedures and strategies for responding to a worst case discharge of animal fats and vegetable oils to the maximum extent practicable; and
- (2)____ Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

10.7.2____ An owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must ensure that any equipment identified in a response plan is capable of operating in the geographic area(s) (*i.e.*, operating environments) in which the facility operates using the criteria in Table 1 of this appendix. When evaluating the operability of equipment, the facility owner or operator must consider limitations that are identified in the appropriate ACPs, including:

- (1) Ice conditions;
- (2) Debris;
- (3) Temperature ranges; and
- (4) Weather-related visibility.

10.7.3.____ The owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must identify the response resources that are available by contract or other approved means, as described in §112.2. The equipment described in the response plan shall, as appropriate, include:

- (1) Containment boom, sorbent boom, or other methods for containing oil floating on the surface or to protect shorelines from impact;
- (2) Oil recovery devices appropriate for the type of animal fat or vegetable oil carried; and
- (3) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

10.7.4____ Response resources identified in a response plan according to section 10.7.3 of this appendix must be capable of commencing an effective on-scene response within the applicable tier response times in section 5.3 of this appendix.

10.7.5____ A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan shall also identify an individual located at the facility to work with the fire department for animal fat and vegetable oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

11.0____ Determining the Availability of Alternative Response Methods

11.1____ For chemical agents to be identified in a response plan, they must be on the NCP Product Schedule that is maintained by EPA. (Some States have a list of approved dispersants for use within State waters. Not all of these State-approved dispersants are listed on the NCP Product Schedule.)

11.2___ Identification of chemical agents in the plan does not imply that their use will be authorized. Actual authorization will be governed by the provisions of the NCP and the applicable ACP.

12.0___ Additional Equipment Necessary to Sustain Response Operations

12.1___ A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a medium discharge of animal fats or vegetables oils for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

12.2___ A facility owner or operator shall evaluate the availability of adequate temporary storage capacity to sustain the effective daily recovery capacities from equipment identified in the plan. Because of the inefficiencies of oil spill recovery devices, response plans must identify daily storage capacity equivalent to twice the effective daily recovery capacity required on-scene. This temporary storage capacity may be reduced if a facility owner or operator can demonstrate by waste stream analysis that the efficiencies of the oil recovery devices, ability to decant waste, or the availability of alternative temporary storage or disposal locations will reduce the overall volume of oily material storage.

12.3___ A facility owner or operator shall ensure that response planning includes the capability to arrange for disposal of recovered oil products. Specific disposal procedures will be addressed in the applicable ACP.

13.0___ References and Availability

13.1___ All materials listed in this section are part of EPA's rulemaking docket and are located in the Superfund Docket, 1235 Jefferson Davis Highway, Crystal Gateway 1, Arlington, Virginia 22202, Suite 105 (Docket Numbers SPCC-2P, SPCC-3P, and SPCC-9P). The docket is available for inspection between 9 a.m. and 4 p.m., Monday through Friday, excluding Federal holidays.

Appointments to review the docket can be made by calling 703-603-9232. Docket hours are subject to change. As provided in 40 CFR part 2, a reasonable fee may be charged for copying services.

13.2___ The docket will mail copies of materials to requestors who are outside the Washington, DC metropolitan area. Materials may be available from other sources, as noted in this section. As provided in 40 CFR part 2, a reasonable fee may be charged for copying services. The RCRA/Superfund Hotline at 800-424-9346 may also provide additional information on where to obtain documents. To contact the RCRA/Superfund Hotline in the Washington, DC metropolitan area, dial 703-412-9810. The Telecommunications Device for the Deaf (TDD) Hotline number is 800-553-7672, or, in the Washington, DC metropolitan area, 703-412-3323.

13.3___ Documents

- (1) National Preparedness for Response Exercise Program (PREP). The PREP draft guidelines are available from United States Coast Guard Headquarters (G-MEP-4), 2100

Second Street, SW., Washington, DC 20593. (See 58 FR 53990-91, October 19, 1993, Notice of Availability of PREP Guidelines).

· (2) "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments (published in the Federal Register by DOC/NOAA at 59 FR 14713-22, March 29, 1994.). The guidance is available in the Superfund Docket (see sections 13.1 and 13.2 of this appendix).

· (3) ASTM Standards. ASTM F 715, ASTM F 989, ASTM F 631-99, ASTM F 808-83 (1999). The ASTM standards are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

· (4) Response Plans for Marine Transportation-Related Facilities, Interim Final Rule. Published by USCG, DOT at 58 FR 7330-76, February 5, 1993.

Table 1 to Appendix E_Response Resource Operating Criteria

Oil Recovery Devices			
Operating environment	Significant wave height \\1\\		Sea state
Rivers and Canals.....	[le] 1 foot.....		1
Inland.....	[le] 3 feet.....		2
Great Lakes.....	[le] 4 feet.....		2-3
Ocean.....	[le] 6 feet.....		3-4

Boom			
Boom property	Use		
	Rivers and canals	Inland	Great Lakes
Significant Wave Height \\1\\.....	[le] 1.....	[le] 3.....	[le] 4.....
Sea State.....	1.....	2.....	2-3.....
Boom height_inches (draft plus freeboard).	6-18.....	18-42.....	18-42.....
Reserve Buoyancy to Weight Ratio..	2:1.....	2:1.....	2:1.....
Total Tensile Strength_pounds....	4,500.....	15,000-20,000.....	15,000-20,000.....
Skirt Fabric Tensile Strength_pounds.	200.....	300.....	300.....
Skirt Fabric Tear Strength_pounds.	100.....	100.....	100.....

\\1\\ Oil recovery devices and boom shall be at least capable of operating in wave height values listed in Table 1 for each operating environment.

Table 2 to Appendix E_Removal Capacity Planning Table for Petroleum

Spill location	Rivers and canals	Near shore
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Sustainability of on-water oil recovery		3 days		
Oil group \1\	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore	Percent natural dissipation
1_Non-persistent oils.....	80	10	10	
2_Light crudes.....	40	15	45	
3_Medium crudes and fuels.....	20	15	65	
4_Heavy crudes and fuels.....	5	20	75	

\1\ The response resource considerations for non-petroleum oils other than animal fat are outlined in section 7.7 of this appendix.

Note: Group 5 oils are defined in section 1.2.8 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.

Table 3 to Appendix E_Emulisification Factors for Petroleum Oil Groups
\1\

Non-Persistent Oil:	
Group 1.....	1.0
Persistent Oil:	
Group 2.....	1.8
Group 3.....	2.0
Group 4.....	1.4

Group 5 oils are defined in section 1.2.7 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.

\1\ See sections 1.2.2 and 1.2.7 of this appendix for group designations for non-persistent and persistent oils, respectively.

Table 4 to Appendix E_On-Water Oil Recovery Resource Mobilization Factors

Operating area	Tier 1
Rivers and Canals.....	0.30
Inland/Nearshore Great Lakes.....	0.15

Note: These mobilization factors are for total resources mobilized, not incremental.

Table 5 to Appendix E_Response Capability Caps by Operating Area

	Tier 1
February 18, 1993:	
All except Rivers & Canals, Great Lakes.....	10K bbls/day 20K
Great Lakes.....	5K bbls/day
Rivers & Canals.....	1.5K bbls/day 3.0K
February 18, 1998:	
All except Rivers & Canals, Great Lakes.....	12.5K bbls/day 25K
Great Lakes.....	6.35K bbls/day 12.5K
Rivers & Canals.....	1.875K bbls/day 3.75K

February 18, 2003:

All except Rivers & Canals, Great Lakes.....	TBD	
Great Lakes.....		TBD
Rivers & Canals.....	TBD	

Note: The caps show cumulative overall effective daily recovery capacity, not incremental.
TBD=To Be Determined.

Table 6 to Appendix E_Removal Capacity Planning Table for Animal Fats and

Spill location	Rivers and canals			Near
Sustainability of on-water oil recovery	3 days			
Oil group \1\	Percent natural loss	Percent recovered floating oil	Percent recovered oil from onshore	Percent natural loss
Group A.....	40	15	45	
Group B.....	20	15	65	

\1\ Substances with a specific gravity greater than 1.0 generally sink below the surface. Response resource considerations are outlined in section 10.6 of this appendix. The owner or operator of the facility is responsible for determining appropriate response resources for Group C oils including locating oil on the bottom or suspended in the water column; containment boom or other appropriate methods for containing oil that may remain floating on the surface; and dredges, pumps, or other equipment to recover animal fats or vegetable oils from the bottom and shoreline.

Note: Group C oils are defined in sections 1.2.1 and 1.2.9 of this appendix; the response resource procedures are discussed in section 10.6 of this appendix.

Table 7 to Appendix E_Emulsification Factors for Animal Fats and Vegetable Oils

Oil Group 1:	
Group A.....	1.0
Group B.....	2.0

\1\ Substances with a specific gravity greater than 1.0 generally sink below the surface of the water. Response resource considerations are outlined in section 10.6 of this appendix. The owner or operator of the facility is responsible for determining appropriate response resources for Group C oils including locating oil on the bottom or suspended in the water column; containment boom or other appropriate methods for containing oil that may remain floating on the surface; and dredges, pumps, or other equipment to recover animal fats or vegetable oils from the bottom and shoreline.

Note: Group C oils are defined in sections 1.2.1 and 1.2.9 of this appendix; the response resource procedures are discussed in section 10.6 of this appendix.

Attachments to Appendix E

**Attachment E-1 --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils**

Part I Background Information

Step (A) Spills are Worst Case Discharge in barrels (Appendix B)

Step (B) Oil Group (Table 1 and Section 1.2 of this appendix)

Step (C) Operating Area (choose one)

Near
shore/Inla
nd Great
LakesOff Rivers
and
Canals

Step (D) Percentages of Oil (Table 2 of this appendix)

Percent Lost to
Natural Dissipation

%

Percent Recovered
Floating Oil

%

Percent
Oil Onshore

%

Step (E) On-Water Oil Recovery $\frac{\text{Step (D)} \times \text{Step (A)}}{100}$

100

%

Step (F) Shore line Recovery $\frac{\text{Step (D)} \times \text{Step (A)}}{100}$

100

%

Step (G) Emulsification Factor

(Table 3 of this appendix)

%

Step (H) On-Water Oil Recovery Resource Mobilization Factor
(Table 4 of this appendix)

Tier 1

%

Tier 2

%

Tier 3

%

1. This worksheet has been designed to assist the user in planning for oil spill response. It is not intended to be used as a substitute for professional judgment. The user should consult the appropriate regulatory requirements and guidelines for oil spill response. The user should also consult the appropriate regulatory requirements and guidelines for oil spill response. The user should also consult the appropriate regulatory requirements and guidelines for oil spill response.

Attachment E 1 (continued)
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils

Part 1: On Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
<input type="text"/>	<input type="text"/>	<input type="text"/>
Step (E1) x Step (F1) x Step (G1)	Step (E1) x Step (F1) x Step (G2)	Step (E1) x Step (F1) x Step (G3)

Part 11: Shoreline Cleanup Volume (barrels)

Step (E2) x Step (F2)

Part 12: On Water Response Capacity by Operating Area
 Table 3 of this appendix.
 Amount needed to be contracted for in barrels/day:

Tier 1	Tier 2	Tier 3
<input type="text"/>	<input type="text"/>	<input type="text"/>
(U1)	(U2)	(U3)

Part 13: On Water Amount Needed to be Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
<input type="text"/>	<input type="text"/>	<input type="text"/>
Part 11 Tier 1 - Step (U1)	Part 11 Tier 2 - Step (U2)	Part 11 Tier 3 - Step (U3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts 11 through 13 by 42 gallons/barrel.

**Attachment E-1 Example --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils**

Part 1 Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix B)

170,000

(A)

Step (B) Oil Group (Table 1 and section 1.2 of this appendix)

4

Step (C) Operating Area (choose one):

A

Near
shore/Inla
nd Great
Lakes

B

Off
Shore
and
Canals

Step (D) Percentages of Oil (Table 2 of this appendix)

Percent Lost to
Natural Dissipation

10

(D1)

Percent Recovered
Floating Oil

50

(D2)

Percent Oil Onshore

70

(D3)

Step (E1) On Water Oil Recovery $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$

85,000

(E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$

119,000

(E2)

Step (F) Equalization Factor

(Table 3 of this appendix)

1.1

(F)

Step (G) On Water Oil Recovery Resource Mobilization Factor
(Table 4 of this appendix)

Tier 1

0.15

(G1)

Tier 2

0.25

(G2)

Tier 3

0.40

(G3)

A facility that handles, stores, or transports multiple groups of oil may do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of oil products in an oil group must be added to determine the percentage of the facility's total oil storage capacity.

Attachment E-1 Example (continued)
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
17,850	29,750	47,600
Step (E1) x Step (I1) x Step (J1)	Step (E1) x Step (F) x Step (J2)	Step (E1) x Step (I1) x Step (J3)

Part III Shoreline Cleanup Volume (barrels/day)

166,600
Step (E2) x Step (F)

Part IV On-Water Response Capacity, by Operating Area
 (Table 3 of this appendix)
 Amount needed to be contracted for (in barrels/day)

Tier 1	Tier 2	Tier 3
16,600	20,000	40,000
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
7,850	9,750	7,600
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

**Attachment E-2 --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils**

Part 1: Background Information

Step (A) Calculate Worst Case Discharge in Barrels (Appendix B)

1

Step (B) Oil Group (Table 1 and section 1.2 of this appendix)

Step (C) Operating Area (Choose one)

Near
shore/inland
and Great
Lakes

or
Rivers
and
Canals

Step (D) Percentages of Oil (Table 6 of this appendix)

Percent Lost to
Natural Dissipation

2

Percent Recovered
Floating Oil

3

Percent
Oil Onshore

4

Step (E) On Water Oil Recovery $\frac{\text{Step (D)2} \times \text{Step (A)1}}{100}$

100

5

Step (F) Onshore Recovery $\frac{\text{Step (D)3} \times \text{Step (A)1}}{100}$

100

6

Step (G) Emulsification Factor

(Table 7 of this appendix)

7

Step (H) On Water Oil Recovery Resource Mobilization Factor
(Table 4 of this appendix)

Tier 1

8

Tier 2

9

Tier 3

10

Instructions: For the purpose of this worksheet, the category of spill is to be categorized as either a Tier 1, Tier 2, or Tier 3 spill. The spill is categorized as a Tier 1 spill if it is a spill of 100,000 gallons or more of oil, or a spill of 10,000 gallons or more of oil that is a spill of 100,000 gallons or more of oil. The spill is categorized as a Tier 2 spill if it is a spill of 10,000 gallons or more of oil, or a spill of 1,000 gallons or more of oil that is a spill of 10,000 gallons or more of oil. The spill is categorized as a Tier 3 spill if it is a spill of 1,000 gallons or more of oil, or a spill of 100 gallons or more of oil that is a spill of 1,000 gallons or more of oil.

Attachment E 2 (continued)
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils

Part II On Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
<input type="text"/>	<input type="text"/>	<input type="text"/>
Step (E1) x Step (F1) x Step (G1)	Step (E2) x Step (F2) x Step (G2)	Step (E3) x Step (F3) x Step (G3)

Part III Shoreline Cleanup Volume (barrels)

Step (I2) x Step (I1)

Part IV On Water Response Capacity By Operating Area
 (Table 5 of this appendix)
 (Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
<input type="text"/>	<input type="text"/>	<input type="text"/>
(J1)	(J2)	(J3)

Part V On Water Amount Needed to be Identified, but not contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
<input type="text"/>	<input type="text"/>	<input type="text"/>
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

**Attachment E-2 Example --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge Animal Fats and Vegetable Oils**

Part 1 Background Information

Step 1A) Calculate Worst Case Discharge in Barrels 500,000

Appendix D:

(A)

Step 1B) Oil Group (Table 7 and section 1.2 of this appendix) H

Step 1C) Spilling Area (choose one)

X	Near Shoreline and Great Lakes	or	Off Rivers and Tribals
---	---	----	---------------------------------

Step 1D) Percentages of Oil (Table 6 of this appendix)

Percent lost to Natural Dispersion	Percent recovered Floating Oil	Percent Oil Onshore
20	20	50
(B1)	(B2)	(B3)

Step 1E) On Water Oil Recovery Step 1D2 x Step 1A) 100,000

100

(E1)

Step 1F) Shoreline Recovery Step 1D3 x Step 1A) 250,000

100

(E2)

Step 1G) Emulsification Factor (Table 7 of this appendix) 2.1

(F)

Step (G) On Water Oil Recovery Resource Mobilization Factor
(Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
0.15	0.25	0.40
(11)	(12)	(13)

A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

**Attachment E-2 Example (continued) --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils (continued)**

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
18,000	22,000	30,000
Step (E1) x Step (I) x Step (G1)	Step (E1) x Step (I1) x Step (G2)	Step (E1) x Step (F1) x Step (G3)

Part III Shoreline Cleanup Volume (barrels)

300,000
Step (H2) x Step (I1)

**Part IV On-Water Response Capacity by Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)**

Tier 1	Tier 2	Tier 3
12,000	25,000	40,000
(J1)	(J2)	(J3)

**Part V On-Water Amount Needed to be Identified, but not Contracted for
in Advance (barrels/day)**

Tier 1	Tier 2	Tier 3
12,000	25,000	30,000
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

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[59 FR 34111, July 1, 1994; 59 FR 49006, Sept. 26, 1994, as amended at 65 FR 40806, 40807, June 30, 2000; 65 FR 47325, Aug. 2, 2000; 66 FR 47325, Aug. 2, 2000; 66 FR 35460, 35461, June 29, 2001]

Appendix F - Facility-Specific Response Plan

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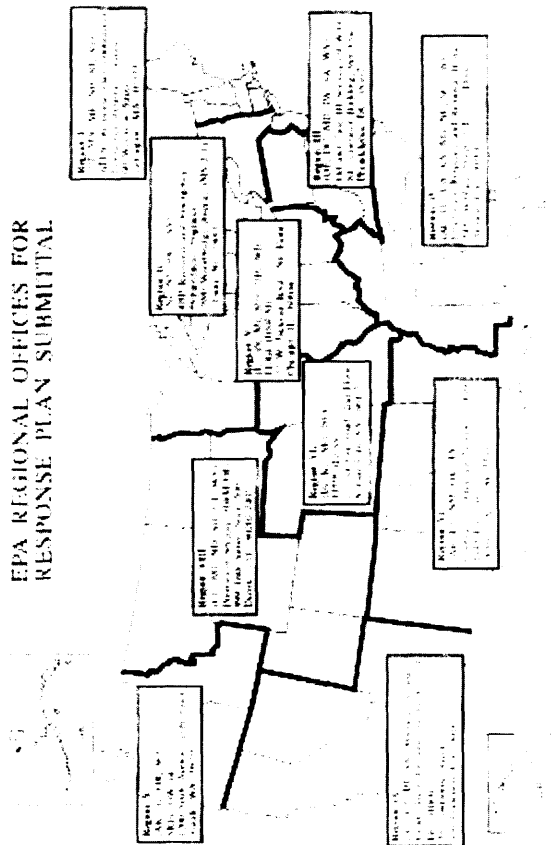
1.0 Model Facility-Specific Response Plan

· (A) Owners or operators of facilities regulated under this part which pose a threat of substantial harm to the environment by discharging oil into or on navigable waters or adjoining shorelines are required to prepare and submit facility-specific response plans to EPA in accordance with the provisions in this appendix. This appendix further describes the required elements in §112.20(h).

· (B) Response plans must be sent to the appropriate EPA Regional office. Figure F-1 of this Appendix lists each EPA Regional office and the address where owners or operators must submit their response plans. Those facilities deemed by the Regional Administrator (RA) to pose a threat of significant and substantial harm to the environment will have their plans reviewed and approved by EPA. In certain cases, information required in the model response plan is similar to information currently maintained in the facility's Spill Prevention, Control, and Countermeasures (SPCC) Plan as required by 40 CFR 112.3. In these cases, owners or operators may reproduce the information and include a photocopy in the response plan.

· (C) A complex may develop a single response plan with a set of core elements for all regulating agencies and separate sections for the non-transportation-related and transportation-related

components, as described in §112.20(h). Owners or operators of large facilities that handle, store, or transport oil at more than one geographically distinct location (e.g., oil storage areas at opposite ends of a single, continuous parcel of property) shall, as appropriate, develop separate sections of the response plan for each storage area.



1.1 ___ Emergency Response Action Plan

Several sections of the response plan shall be co-located for easy access by response personnel during an actual emergency or oil discharge. This collection of sections shall be called the Emergency Response Action Plan. The Agency intends that the Action Plan contain only as much information as is necessary to combat the discharge and be arranged so response actions are not delayed. The Action Plan may be arranged in a number of ways. For example, the sections of the Emergency Response Action Plan may be photocopies or condensed versions of the forms included in the associated sections of the response plan. Each Emergency Response Action Plan section may be tabbed for quick reference. The Action Plan shall be maintained in the front of the same binder that contains the complete response plan or it shall be contained in a separate binder. In the latter case, both binders shall be kept together so that the entire plan can be accessed by the qualified individual and appropriate spill response personnel. The Emergency Response Action Plan shall be made up of the following sections:

1. Qualified Individual Information (Section 1.2) partial
2. Emergency Notification Phone List (Section 1.3.1) partial
3. Spill Response Notification Form (Section 1.3.1) partial
4. Response Equipment List and Location (Section 1.3.2) complete
5. Response Equipment Testing and Deployment (Section 1.3.3) complete
6. Facility Response Team (Section 1.3.4) partial
7. Evacuation Plan (Section 1.3.5) condensed
8. Immediate Actions (Section 1.7.1) complete
9. Facility Diagram (Section 1.9) complete

1.2 ____ Facility Information

The facility information form is designed to provide an overview of the site and a description of past activities at the facility. Much of the information required by this section may be obtained from the facility's existing SPCC Plan.

1.2.1 ____ *Facility name and location:* Enter facility name and street address. Enter the address of corporate headquarters only if corporate headquarters are physically located at the facility. Include city, county, state, zip code, and phone number.

1.2.2 ____ *Latitude and Longitude:* Enter the latitude and longitude of the facility. Include degrees, minutes, and seconds of the main entrance of the facility.

1.2.3 ____ *Wellhead Protection Area:* Indicate if the facility is located in or drains into a wellhead protection area as defined by the Safe Drinking Water Act of 1986 (SDWA). 1 The response plan requirements in the Wellhead Protection Program are outlined by the State or Territory in which the facility resides.

1A wellhead protection area is defined as the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield. For further information regarding State and territory

protection programs, facility owners or operators may contact the SDWA Hotline at 1-800-426-4791.

1.2.4 Owner/operator: Write the name of the company or person operating the facility and the name of the person or company that owns the facility, if the two are different. List the address of the owner, if the two are different.

1.2.5 Qualified Individual: Write the name of the qualified individual for the entire facility. If more than one person is listed, each individual indicated in this section shall have full authority to implement the facility response plan. For each individual, list: name, position, home and work addresses (street addresses, not P.O. boxes), emergency phone number, and specific response training experience.

1.2.6 Date of Oil Storage Start-up: Enter the year which the present facility first started storing oil.

1.2.7 Current Operation: Briefly describe the facility's operations and include the North American Industrial Classification System (NAICS) code.

1.2.8 Dates and Type of Substantial Expansion: Include information on expansions that have occurred at the facility. Examples of such expansions include, but are not limited to: Throughput expansion, addition of a product line, change of a product line, and installation of additional oil storage capacity. The data provided shall include all facility historical information and detail the expansion of the facility. An example of substantial expansion is any material alteration of the facility which causes the owner or operator of the facility to re-evaluate and increase the response equipment necessary to adequately respond to a worst case discharge from the facility.

Date of Last Update: ____

Facility Information Form

Facility Name: ____ Location (Street Address):

City: ____ State: ____ Zip: ____

County: ____ Phone Number: (____) ____

Latitude: ____ Degrees ____ Minutes ____ Seconds

Longitude: ____ Degrees ____ Minutes ____ Seconds

Wellhead Protection Area: Owner: ____ Owner Location (Street Address):

____ (if different from Facility Address)

City: ____ State: ____ Zip: ____

County: ____ Phone Number: (____) ____

Operator (if not Owner):

Qualified Individual(s): (attach additional sheets if more than one)

____ Name: ____ Position: ____ Work Address: ____ Home Address: ____ Emergency Phone Number:
(____) Date of Oil Storage Start-up: Current Operations: Date(s) and Type(s) of Substantial
Expansion(s):

(Attach additional sheets if necessary)

1.3 ____ Emergency Response Information

· (A) The information provided in this section shall describe what will be needed in an actual emergency involving the discharge of oil or a combination of hazardous substances and oil discharge. The Emergency Response Information section of the plan must include the following components:

- (1) The information provided in the Emergency Notification Phone List in section 1.3.1 identifies and prioritizes the names and phone numbers of the organizations and personnel that need to be notified immediately in the event of an emergency. This section shall include all the appropriate phone numbers for the facility. These numbers must be verified each time the plan is updated. The contact list must be accessible to all facility employees to ensure that, in case of a discharge, any employee on site could immediately notify the appropriate parties.
- (2) The Spill Response Notification Form in section 1.3.1 creates a checklist of information that shall be provided to the National Response Center (NRC) and other response personnel. All information on this checklist must be known at the time of notification, or be in the process of being collected. This notification form is based on a similar form used by the NRC. Note: Do not delay spill notification to collect the information on the list.
- (3) Section 1.3.2 provides a description of the facility's list of emergency response equipment and location of the response equipment. When appropriate, the amount of oil that emergency response equipment can handle and any limitations (e.g., launching sites) must be described.
- (4) Section 1.3.3 provides information regarding response equipment tests and deployment drills. Response equipment deployment exercises shall be conducted to ensure that response equipment is operational and the personnel who would operate the equipment in a spill response are capable of deploying and operating it. Only a representative sample of each type of response equipment needs to be deployed and operated, as long as the remainder is properly maintained. If appropriate, testing of response equipment may be conducted while it is being deployed. Facilities without facility-owned response equipment must ensure that the oil spill removal organization that is identified in the response plan to provide this response equipment certifies that the deployment exercises have been met. Refer to the National Preparedness for Response Exercise Program (PREP) Guidelines (see Appendix E to this part, section 13, for availability), which satisfy Oil Pollution Act (OPA) response exercise requirements.
- (5) Section 1.3.4 lists the facility response personnel, including those employed by the facility and those under contract to the facility for response activities, the amount of time needed

for personnel to respond, their responsibility in the case of an emergency, and their level of response training. Three different forms are included in this section. The Emergency Response Personnel List shall be composed of all personnel employed by the facility whose duties involve responding to emergencies, including oil discharges, even when they are not physically present at the site. An example of this type of person would be the Building Engineer-in-Charge or Plant Fire Chief. The second form is a list of the Emergency Response Contractors (both primary and secondary) retained by the facility. Any changes in contractor status must be reflected in updates to the response plan. Evidence of contracts with response contractors shall be included in this section so that the availability of resources can be verified. The last form is the Facility Response Team List, which shall be composed of both emergency response personnel (referenced by job title/position) and emergency response contractors, included in one of the two lists described above, that will respond immediately upon discovery of an oil discharge or other emergency (i.e., the first people to respond). These are to be persons normally on the facility premises or primary response contractors. Examples of these personnel would be the Facility Hazardous Materials (HAZMAT) Spill Team 1, Facility Fire Engine Company 1, Production Supervisor, or Transfer Supervisor. Company personnel must be able to respond immediately and adequately if contractor support is not available.

- (6) Section 1.3.5 lists factors that must, as appropriate, be considered when preparing an evacuation plan.

- (7) Section 1.3.6 references the responsibilities of the qualified individual for the facility in the event of an emergency.

- (B) The information provided in the emergency response section will aid in the assessment of the facility's ability to respond to a worst case discharge and will identify additional assistance that may be needed. In addition, the facility owner or operator may want to produce a wallet-size card containing a checklist of the immediate response and notification steps to be taken in the event of an oil discharge.

1.3.1 _____ Notification

Date of Last Update:

Emergency Notification Phone List Whom To Notify

Reporter's Name: Date: Facility Name: Owner Name: Facility Identification Number: Date and Time of Each NRC Notification:

----- Organization	----- Phone No.
1. National Response Center (NRC):	1-800-424-8802
2. Qualified Individual:	-----
Evening Phone:	-----
3. Company Response Team:	-----
Evening Phone:	-----

4. Federal On-Scene Coordinator (OSC) and/or Regional Response Center (RRC):
- Evening Phone(s):
- Pager Number(s):
5. Local Response Team (Fire Dept./Cooperatives):
6. Fire Marshall:
- Evening Phone:
7. State Emergency Response Commission (SERC):
- Evening Phone:
8. State Police:
9. Local Emergency Planning Committee (LEPC):
10. Local Water Supply System:
- Evening Phone:
11. Weather Report:
12. Local Television/Radio Station for Evacuation Notification:
13. Hospitals:
-

Spill Response Notification Form

Reporter's Last Name: First: M.I.: Position:

Phone Numbers:

Day (_____)_____ -

Evening (_____)_____ -

Company: Organization Type: Address: City: State: Zip:

Were Materials Discharged? ____ (Y/N) Confidential? ____ (Y/N)

Meeting Federal Obligations to Report? ____ (Y/N) Date Called: ____

Calling for Responsible Party? ____ (Y/N) Time Called: ____

Incident Description

Source and/or Cause of Incident: Date of Incident:

Time of Incident: ____ AM/PM

Incident Address/Location:

Nearest City: _____ State: ____ County: ____ Zip: ____

Distance from City: ____ Units of Measure: ____ Direction from City: ____

Section: ____ Township: ____ Range: ____ Borough: ____

Container Type: ____ Tank Oil Storage Capacity: ____ Units of Measure: ____

Facility Oil Storage Capacity: ____ Units of Measure: ____

Facility Latitude: ____ Degrees ____ Minutes ____ Seconds

Facility Longitude: ____ Degrees ____ Minutes ____ Seconds

Material

CHRIS Code	Discharged quantity	Unit of measure
-----	-----	-----
-----	-----	-----
-----	-----	-----
-----	-----	-----
-----	-----	-----

Response Action

Actions Taken to Correct, Control or Mitigate Incident:

Impact

Number of Injuries: ____ Number of Deaths: ____

Were there Evacuations? ____ (Y/N) Number Evacuated: ____

Was there any Damage? ____ (Y/N)

Damage in Dollars (approximate): Medium Affected: Description: More Information about Medium:
Additional Information

Any information about the incident not recorded elsewhere in the report:

Caller Notifications

EPA? ____ (Y/N) USCG? ____ (Y/N) State? ____ (Y/N)

Other? ____ (Y/N) Describe: _____

1.3.2 ____ Response Equipment List

Date of Last Update: ____

Facility Response Equipment List

1. Skimmers/Pumps-Operational Status: ____ Type, Model, and Year: ____

____ Type ____ Model ____ Year

____ Number:

____ Capacity: ____ gal./min.

____ Daily Effective Recovery Rate: ____ Storage Location(s): ____ Date Fuel Last Changed: 2. Boom-
Operational Status: ____ Type, Model, and Year:

____ Type ____ Model ____ Year

____ Number:

Size (length): ____ ft.

Containment Area: ____ sq. ft.

____ Storage Location:

3. Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule)

Type	Amount	Date purchased

Were appropriate procedures used to receive approval for use of dispersants in accordance with the NCP (40 CFR 300.910) and the Area Contingency Plan (ACP), where applicable? ____ (Y/N).

Name and State of On-Scene Coordinator (OSC) authorizing use: ____ .

Date Authorized: ____ .

4. Dispersant Dispensing Equipment-Operational Status: ____ .

Type and year	Capacity	Storage location	Response time (minutes)

5. Sorbents-Operational Status: ____ Type and Year Purchased: ____ Amount: ____ Absorption Capacity (gal.): ____ Storage Location(s): 6. Hand Tools-Operational Status:

Type and year	Quantity	Storage location

7. Communication Equipment (include operating frequency and channel and/or cellular phone numbers)-Operational Status: ____

Type and year	Quantity	Storage location/ number

8. Fire Fighting and Personnel Protective Equipment-Operational Status: ____

Type and year	Quantity	Storage location
-----	-----	-----
-----	-----	-----
-----	-----	-----
-----	-----	-----

9. Other (e.g., Heavy Equipment, Boats and Motors)-Operational Status: ____

Type and year	Quantity	Storage location
-----	-----	-----
-----	-----	-----
-----	-----	-----
-----	-----	-----

1.3.3 ____ Response Equipment Testing/Deployment

Date of Last Update: ____

Response Equipment Testing and Deployment Drill Log

Last Inspection or Response Equipment Test Date: Inspection Frequency: Last Deployment Drill Date:
Deployment Frequency: Oil Spill Removal Organization Certification (if applicable):

1.3.4 ____ Personnel

Date of Last Update: ____

Emergency Response Pe:
Company Personne

Name	Phone \1\	Response time
-----	-----	-----
1. -----	-----	-----
2. -----	-----	-----
3. -----	-----	-----
4. -----	-----	-----

5.

6.

7.

8.

9.

10.

11.

12.

\1\ Phone number to be used when person is not on-site.

Emergency Response Contractors

Date of Last Update: _____

Contractor	Phone	Response time	Contract
1.			
2.			
3.			
4.			

\1\ Include evidence of contracts/agreements with response contractors to ensure that and response equipment.

Facility Response Team

Date of Last Update: _____

Team member	Response time (minutes)	PI
Qualified Individual:		
	/
	/
	/

Note: If the facility uses contracted help in an emergency response situation, the provide the contractors' names and review the contractors' capacities to provide response equipment.

1.3.5.1 ____ Based on the analysis of the facility, as discussed elsewhere in the plan, a facility-wide evacuation plan shall be developed. In addition, plans to evacuate parts of the facility that are at a high risk of exposure in the event of a discharge or other release must be developed. Evacuation routes must be shown on a diagram of the facility (see section 1.9 of this appendix). When developing evacuation plans, consideration must be given to the following factors, as appropriate:

- (1) Location of stored materials;
- (2) Hazard imposed by discharged material;
- (3) Discharge flow direction;
- (4) Prevailing wind direction and speed;
- (5) Water currents, tides, or wave conditions (if applicable);
- (6) Arrival route of emergency response personnel and response equipment;

- (7) Evacuation routes;
- (8) Alternative routes of evacuation;
- (9) Transportation of injured personnel to nearest emergency medical facility;
- (10) Location of alarm/notification systems;
- (11) The need for a centralized check-in area for evacuation validation (roll call);
- (12) Selection of a mitigation command center; and
- (13) Location of shelter at the facility as an alternative to evacuation.

1.3.5.2 ____ One resource that may be helpful to owners or operators in preparing this section of the response plan is *The Handbook of Chemical Hazard Analysis Procedures* by the Federal Emergency Management Agency (FEMA), Department of Transportation (DOT), and EPA. *The Handbook of Chemical Hazard Analysis Procedures* is available from: FEMA , Publication Office, 500 C. Street, S.W., Washington, DC 20472, (202) 646-3484.

1.3.5.3 ____ As specified in §112.20(h)(1)(vi), the facility owner or operator must reference existing community evacuation plans, as appropriate.

1.3.6 ____ Qualified Individual's Duties

The duties of the designated qualified individual are specified in §112.20(h)(3)(ix). The qualified individual's duties must be described and be consistent with the minimum requirements in §112.20(h)(3)(ix). In addition, the qualified individual must be identified with the Facility Information in section 1.2 of the response plan.

1.4 ____ Hazard Evaluation

This section requires the facility owner or operator to examine the facility's operations closely and to predict where discharges could occur. Hazard evaluation is a widely used industry practice that allows facility owners or operators to develop a complete understanding of potential hazards and the response actions necessary to address these hazards. *The Handbook of Chemical Hazard Analysis Procedures*, prepared by the EPA, DOT, and the FEMA and the *Hazardous Materials Emergency Planning Guide* (NRT-1), prepared by the National Response Team are good references for conducting a hazard analysis. Hazard identification and evaluation will assist facility owners or operators in planning for potential discharges, thereby reducing the severity of discharge impacts that may occur in the future. The evaluation also may help the operator identify and correct potential sources of discharges. In addition, special hazards to workers and emergency response personnel's health and safety shall be evaluated, as well as the facility's oil spill history.

1.4.1 ____ Hazard ____ Identification

The Tank and Surface Impoundment (SI) forms, or their equivalent, that are part of this section must be completed according to the directions below. ("Surface Impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well or a seepage facility.) Similar worksheets, or their equivalent, must be developed for any other type of storage containers.

- (1) List each tank at the facility with a separate and distinct identifier. Begin aboveground tank identifiers with an "A" and belowground tank identifiers with a "B", or submit multiple sheets with the aboveground tanks and belowground tanks on separate sheets.
- (2) Use gallons for the maximum capacity of a tank; and use square feet for the area.
- (3) Using the appropriate identifiers and the following instructions, fill in the appropriate forms:
 - (a) Tank or SI number-Using the aforementioned identifiers (A or B) or multiple reporting sheets, identify each tank or SI at the facility that stores oil or hazardous materials.
 - (b) Substance Stored-For each tank or SI identified, record the material that is stored therein. If the tank or SI is used to store more than one material, list all of the stored materials.
 - (c) Quantity Stored-For each material stored in each tank or SI, report the average volume of material stored on any given day.
 - (d) Tank Type or Surface Area/Year-For each tank, report the type of tank (e.g., floating top), and the year the tank was originally installed. If the tank has been refabricated, the year that the latest refabrication was completed must be recorded in parentheses next to the year installed. For each SI, record the surface area of the impoundment and the year it went into service.
 - (e) Maximum Capacity-Record the operational maximum capacity for each tank and SI. If the maximum capacity varies with the season, record the upper and lower limits.
 - (f) Failure/Cause-Record the cause and date of any tank or SI failure which has resulted in a loss of tank or SI contents.
- (4) Using the numbers from the tank and SI forms, label a schematic drawing of the facility. This drawing shall be identical to any schematic drawings included in the SPCC Plan.
- (5) Using knowledge of the facility and its operations, describe the following in writing:
 - (a) The loading and unloading of transportation vehicles that risk the discharge of oil or release of hazardous substances during transport processes. These operations may include loading and unloading of trucks, railroad cars, or vessels. Estimate the volume of material involved in transfer operations, if the exact volume cannot be determined.

- Hazard Identification :
Date of Last Update

Hazard Identification Surface In
Date of Last Update

Attach as many sheets as necessary.

1.4.2 ____ Vulnerability Analysis

The vulnerability analysis shall address the potential effects (i.e., to human health, property, or the environment) of an oil discharge. Attachment C-III to Appendix C to this part provides a method that owners or operators shall use to determine appropriate distances from the facility to fish and wildlife and sensitive environments. Owners or operators can use a comparable formula that is considered acceptable by the RA. If a comparable formula is used, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet. This analysis must be prepared for each facility and, as appropriate, must discuss the vulnerability of:

- (1) Water intakes (drinking, cooling, or other);
- (2) Schools;
- (3) Medical facilities;
- (4) Residential areas;
- (5) Businesses;
- (6) Wetlands or other sensitive environments; 2

2Refer to the DOC/NOAA "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (See appendix E to this part, section 13, for availability).

- (7) Fish and wildlife;
- (8) Lakes and streams;
- (9) Endangered flora and fauna;
- (10) Recreational areas;
- (11) Transportation routes (air, land, and water);
- (12) Utilities; and
- (13) Other areas of economic importance (e.g., beaches, marinas) including terrestrially sensitive environments, aquatic environments, and unique habitats.

1.4.3 ____ Analysis of the Potential for an Oil Discharge

Each owner or operator shall analyze the probability of a discharge occurring at the facility. This analysis shall incorporate factors such as oil discharge history, horizontal range of a potential discharge, and vulnerability to natural disaster, and shall, as appropriate, incorporate other factors such as tank age. This analysis will provide information for developing discharge scenarios for a worst case

discharge and small and medium discharges and aid in the development of techniques to reduce the size and frequency of discharges. The owner or operator may need to research the age of the tanks the oil discharge history at the facility.

1.4.4 ____ Facility Reportable Oil Spill History

Briefly describe the facility's reportable oil spill history for the entire life of the facility to the extent that such information is reasonably identifiable, including:

3As described in 40 CFR part 110, reportable oil spills are those that: (a) violate applicable water quality standards, or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

- (1) Date of discharge(s);
- (2) List of discharge causes;
- (3) Material(s) discharged;
- (4) Amount discharged in gallons;
- (5) Amount of discharge that reached navigable waters, if applicable;
- (6) Effectiveness and capacity of secondary containment;
- (7) Clean-up actions taken;
- (8) Steps taken to reduce possibility of recurrence;
- (9) Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged;
- (10) Enforcement actions;
- (11) Effectiveness of monitoring equipment; and
- (12) Description(s) of how each oil discharge was detected.

The information solicited in this section may be similar to requirements in 40 CFR 112.4(a). Any duplicate information required by § 112.4(a) may be photocopied and inserted.

1.5 ____ Discharge Scenarios

In this section, the owner or operator is required to provide a description of the facility's worst case discharge, as well as a small and medium discharge, as appropriate. A multi-level planning approach

has been chosen because the response actions to a discharge (*i.e.*, necessary response equipment, products, and personnel) are dependent on the magnitude of the discharge. Planning for lesser discharges is necessary because the nature of the response may be qualitatively different depending on the quantity of the discharge. The facility owner or operator shall discuss the potential direction of the discharge pathway.

1.5.1 ____ Small and Medium Discharges

1.5.1.1 ____ To address multi-level planning requirements, the owner or operator must consider types of facility-specific discharge scenarios that may contribute to a small or medium discharge. The scenarios shall account for all the operations that take place at the facility, including but not limited to:

- (1) Loading and unloading of surface transportation;
- (2) Facility maintenance;
- (3) Facility piping;
- (4) Pumping stations and sumps;
- (5) Oil storage tanks;
- (6) Vehicle refueling; and
- (7) Age and condition of facility and components.

1.5.1.2 ____ The scenarios shall also consider factors that affect the response efforts required by the facility. These include but are not limited to:

- (1) Size of the discharge;
- (2) Proximity to downgradient wells, waterways, and drinking water intakes;
- (3) Proximity to fish and wildlife and sensitive environments;
- (4) Likelihood that the discharge will travel offsite (*i.e.*, topography, drainage);
- (5) Location of the material discharged (*i.e.*, on a concrete pad or directly on the soil);
- (6) Material discharged;
- (7) Weather or aquatic conditions (*i.e.*, river flow);
- (8) Available remediation equipment;
- (9) Probability of a chain reaction of failures; and

- (10) Direction of discharge pathway.

1.5.2___ Worst Case Discharge

1.5.2.1___ In this section, the owner or operator must identify the worst case discharge volume at the facility. Worksheets for production and non-production facility owners or operators to use when calculating worst case discharge are presented in Appendix D to this part. When planning for the worst case discharge response, all of the aforementioned factors listed in the small and medium discharge section of the response plan shall be addressed.

1.5.2.2___ For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In this section of the response plan, owners or operators must provide evidence that oil storage tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge volume shall be based on the combined oil storage capacity of all manifold tanks or the oil storage capacity of the largest single oil storage tank within the secondary containment area, whichever is greater. For permanently manifolded oil storage tanks that function as one storage unit, the worst case discharge shall be based on the combined oil storage capacity of all manifolded tanks or the oil storage capacity of the largest single tank within a secondary containment area, whichever is greater. For purposes of the worst case discharge calculation, permanently manifolded oil storage tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.6___ Discharge Detection Systems

In this section, the facility owner or operator shall provide a detailed description of the procedures and equipment used to detect discharges. A section on discharge detection by personnel and a discussion of automated discharge detection, if applicable, shall be included for both regular operations and after hours operations. In addition, the facility owner or operator shall discuss how the reliability of any automated system will be checked and how frequently the system will be inspected.

1.6.1___ Discharge Detection by Personnel

In this section, facility owners or operators shall describe the procedures and personnel that will detect any discharge of oil or release of a hazardous substance. A thorough discussion of facility inspections must be included. In addition, a description of initial response actions shall be addressed. This section shall reference section 1.3.1 of the response plan for emergency response information.

1.6.2___ Automated Discharge Detection

In this section, facility owners or operators must describe any automated discharge detection equipment that the facility has in place. This section shall include a discussion of overfill alarms, secondary containment sensors, etc. A discussion of the plans to verify an automated alarm and the actions to be taken once verified must also be included.

1.7 ____ Plan Implementation

In this section, facility owners or operators must explain in detail how to implement the facility's emergency response plan by describing response actions to be carried out under the plan to ensure the safety of the facility and to mitigate or prevent discharges described in section 1.5 of the response plan. This section shall include the identification of response resources for small, medium, and worst case discharges; disposal plans; and containment and drainage planning. A list of those personnel who would be involved in the cleanup shall be identified. Procedures that the facility will use, where appropriate or necessary, to update their plan after an oil discharge event and the time frame to update the plan must be described.

1.7.1 ____ Response Resources for Small, Medium, and Worst Case Discharges

1.7.1.1 ____ Once the discharge scenarios have been identified in section 1.5 of the response plan, the facility owner or operator shall identify and describe implementation of the response actions. The facility owner or operator shall demonstrate accessibility to the proper response personnel and equipment to effectively respond to all of the identified discharge scenarios. The determination and demonstration of adequate response capability are presented in Appendix E to this part. In addition, steps to expedite the cleanup of oil discharges must be discussed. At a minimum, the following items must be addressed:

- (1) Emergency plans for spill response;
- (2) Additional response training;
- (3) Additional contracted help;
- (4) Access to additional response equipment/experts; and
- (5) Ability to implement the plan including response training and practice drills.

1.7.1.2A recommended form detailing immediate actions follows.

Oil Spill Response_Immediate Actions

1. Stop the product flow.....	Act quickly to secure pumps, close valves, etc.
2. Warn personnel.....	Enforce safety and security measures.
3. Shut off ignition sources.....	Motors, electrical circuits, open flames, etc.
4. Initiate containment.....	Around the tank and/or in the water with oil boom.
5. Notify NRC.....	1-800-424-8802
6. Notify OSC	
7. Notify, as appropriate	

Source: FOSS, Oil Spill Response_Emergency Procedures, Revised December 3, 1992.

1.7.2___ Disposal Plans

1.7.2.1___ Facility owners or operators must describe how and where the facility intends to recover, reuse, decontaminate, or dispose of materials after a discharge has taken place. The appropriate permits required to transport or dispose of recovered materials according to local, State, and Federal requirements must be addressed. Materials that must be accounted for in the disposal plan, as appropriate, include:

- (1) Recovered product;
- (2) Contaminated soil;
- (3) Contaminated equipment and materials, including drums, tank parts, valves, and shovels;
- (4) Personnel protective equipment;
- (5) Decontamination solutions;
- (6) Adsorbents; and
- (7) Spent chemicals.

1.7.2.2___ These plans must be prepared in accordance with Federal (e.g., the Resource Conservation and Recovery Act [RCRA]), State, and local regulations, where applicable. A copy of the disposal plans from the facility's SPCC Plan may be inserted with this section, including any diagrams in those plans.

Material	Disposal facility	Location	RCRA permit/ manifest
1.			
2.			
3.			
4.			

1.7.3___ Containment and Drainage Planning

A proper plan to contain and control a discharge through drainage may limit the threat of harm to human health and the environment. This section shall describe how to contain and control a discharge through drainage, including:

- (1) The available volume of containment (use the information presented in

section 1.4.1 of the response plan);

- (2) The route of drainage from oil storage and transfer areas;
- (3) The construction materials used in drainage troughs;
- (4) The type and number of valves and separators used in the drainage system;
- (5) Sump pump capacities;
- (6) The containment capacity of weirs and booms that might be used and their location (see section 1.3.2 of this appendix); and
- (7) Other cleanup materials.

In addition, a facility owner or operator must meet the inspection and monitoring requirements for drainage contained in 40 CFR part 112, subparts A through C. A copy of the containment and drainage plans that are required in 40 CFR part 112, subparts A through C may be inserted in this section, including any diagrams in those plans.

Note:

The general permit for stormwater drainage may contain additional requirements.

1.8 ____ Self-Inspection, Drills/Exercises, and Response Training

The owner or operator must develop programs for facility response training and for drills/exercises according to the requirements of 40 CFR 112.21. Logs must be kept for facility drills/exercises, personnel response training, and spill prevention meetings. Much of the recordkeeping information required by this section is also contained in the SPCC Plan required by 40 CFR 112.3. These logs may be included in the facility response plan or kept as an annex to the facility response plan.

1.8.1 ____ Facility Self-Inspection

Under 40 CFR 112.7(e), you must include the written procedures and records of inspections for each facility in the SPCC Plan. You must include the inspection records for each container, secondary containment, and item of response equipment at the facility. You must cross-reference the records of inspections of each container and secondary containment required by 40 CFR 112.7(e) in the facility response plan. The inspection record of response equipment is a new requirement in this plan. Facility self-inspection requires two-steps: (1) a checklist of things to inspect; and (2) a method of recording the actual inspection and its findings. You must note the date of each inspection. You must keep facility response plan records for five years. You must keep SPCC records for three years.

1.8.1.1. ____ Tank Inspection

The tank inspection checklist presented below has been included as guidance during inspections and

monitoring. Similar requirements exist in 40 CFR part 112, subparts A through C. Duplicate information from the SPCC Plan may be photocopied and inserted in this section. The inspection checklist consists of the following items:

Tank Inspection Checklist

1. Check tanks for leaks, specifically looking for:

- A. drip marks;
- B. discoloration of tanks;
- C. puddles containing spilled or leaked material;
- D. corrosion;
- E. cracks; and
- F. localized dead vegetation.

2. Check foundation for:

- A. cracks;
- B. discoloration;
- C. puddles containing spilled or leaked material;
- D. settling;
- E. gaps between tank and foundation; and
- F. damage caused by vegetation roots.

3. Check piping for:

- A. droplets of stored material;
- B. discoloration;
- C. corrosion;
- D. bowing of pipe between supports;
- E. evidence of stored material seepage from valves or seals; and
- F. localized dead vegetation.

[illegible]

Using the Emergency Response Equipment List provided in section 1.3.2 of the response plan, describe each type of response equipment, checking for the following:

1. Inventory (item and quantity);
2. Storage location;
3. Accessibility (time to access and respond);
4. Operational status/condition;
5. Actual use/testing (last test date and frequency of testing); and
6. Shelf life (present age, expected replacement date).

Response Equipment Inspection Log
[Use section 1.3.2 of the response plan as a checklist]

Date

[illegible]

Inspect the secondary containment (as described in sections 1.4.1 and 1.7.2 of the response plan), checking the following:

1. Dike or berm system.
 - A. Level of precipitation in dike/available capacity;
 - B. Operational status of drainage valves;
 - C. Dike or berm permeability;
 - D. Debris;
 - E. Erosion;
 - F. Permeability of the earthen floor of diked area; and
 - G. Location/status of pipes, inlets, drainage beneath tanks, etc.
2. Secondary containment
 - A. Cracks;
 - B. Discoloration;

- C. Presence of spilled or leaked material (standing liquid);
- D. Corrosion; and
- E. Valve conditions.

3. Retention and drainage ponds

- A. Erosion;
- B. Available capacity;
- C. Presence of spilled or leaked material;
- D. Debris; and
- E. Stressed vegetation.

The tank inspection checklist presented below has been included as guidance during inspections and monitoring. Similar requirements exist in 40 CFR part 112, subparts A through C. Similar requirements exist in 40 CFR 112.7(e). Duplicate information from the SPCC Plan may be photocopied and inserted in this section.

1.8.2 ____ Facility Drills/Exercises

· (A) CWA section 311(j)(5), as amended by OPA, requires the response plan to contain a description of facility drills/exercises. According to 40 CFR 112.21(c), the facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. Following the PREP guidelines (see Appendix E to this part, section 13, for availability) would satisfy a facility's requirements for drills/exercises under this part. Alternately, under §112.21(c), a facility owner or operator may develop a program that is not based on the PREP guidelines. Such a program is subject to approval by the Regional Administrator based on the description of the program provided in the response plan.

· (B) The PREP Guidelines specify that the facility conduct internal and external drills/exercises. The internal exercises include: qualified individual notification drills, spill management team tabletop exercises, equipment deployment exercises, and unannounced exercises. External exercises include Area Exercises. Credit for an Area or Facility-specific Exercise will be given to the facility for an actual response to a discharge in the area if the plan was utilized for response to the discharge and the objectives of the Exercise were met and were properly evaluated, documented, and self-certified.

· (C) Section 112.20(h)(8)(ii) requires the facility owner or operator to provide a description of the drill/exercise program to be carried out under the response plan. Qualified Individual Notification Drill and Spill Management Team Tabletop Drill logs shall be provided in sections 1.8.2.1 and 1.8.2.2, respectively. These logs may be included in the facility response plan or kept as an annex to the facility response plan. See section 1.3.3 of this appendix for Equipment Deployment Drill Logs.

Qualified Individual Notification Drill Log

Spill Management Team Tabletop Exercise Log

Section 112.21(a) requires facility owners or operators to develop programs for facility response training. Facility owners or operators are required by § 112.20(h)(8)(iii) to provide a description of the response training program to be carried out under the response plan. A facility's training program can be based on the USCG's Training Elements for Oil Spill Response, to the extent applicable to facility operations, or another response training program acceptable to the RA. The training elements are available from the USCG Office of Response (G-MOR) at (202) 267-0518 or fax (202) 267-4085. Personnel response training logs and discharge prevention meeting logs shall be included in sections 1.8.3.1 and 1.8.3.2 of the response plan respectively. These logs may be included in the facility response plan or kept as an annex to the facility response plan.

1.8.3.1 Personnel Response Training Logs

Personnel Response Training Log

[illegible]

1.8.3.2 Discharge Prevention Meetings Logs

Discharge Prevention Meeting Log

Date: Attendees:

Subject/issue identified	Required action	Implementation date

1.9 _____Diagrams

The facility-specific response plan shall include the following diagrams. Additional diagrams that would aid in the development of response plan sections may also be included.

- (1) The Site Plan Diagram shall, as appropriate, include and identify:
 - (A) the entire facility to scale;
 - (B) above and below ground bulk oil storage tanks;
 - (C) the contents and capacities of bulk oil storage tanks;
 - (D) the contents and capacity of drum oil storage areas;
 - (E) the contents and capacities of surface impoundments;
 - (F) process buildings;
 - (G) transfer areas;
 - (H) secondary containment systems (location and capacity);
 - (I) structures where hazardous materials are stored or handled, including materials stored and capacity of storage;
 - (J) location of communication and emergency response equipment;
 - (K) location of electrical equipment which contains oil; and
 - (L) for complexes only, the interface(s) (i.e., valve or component) between the portion of the facility regulated by EPA and the portion(s) regulated by other Agencies. In most cases, this interface is defined as the last valve inside secondary containment before piping leaves the secondary containment area to connect to the transportation-related portion of the facility (i.e., the structure used or intended to be used to transfer oil to or from a vessel or pipeline). In the absence of secondary containment, this interface is the valve manifold adjacent to the tank nearest the transfer structure as described above. The interface may be defined differently at a specific facility if agreed to by the RA and the appropriate Federal official.

- (2) The Site Drainage Plan Diagram shall, as appropriate, include:
 - (A) major sanitary and storm sewers, manholes, and drains;
 - (B) weirs and shut-off valves;
 - (C) surface water receiving streams;
 - (D) fire fighting water sources;
 - (E) other utilities;
 - (F) response personnel ingress and egress;
 - (G) response equipment transportation routes; and
 - (H) direction of discharge flow from discharge points.
- (3) The Site Evacuation Plan Diagram shall, as appropriate, include:
 - (A) site plan diagram with evacuation route(s); and
 - (B) location of evacuation regrouping areas.

1.10 ____ Security

According to 40 CFR 112.7(g) facilities are required to maintain a certain level of security, as appropriate. In this section, a description of the facility security shall be provided and include, as appropriate:

- (1) emergency cut-off locations (automatic or manual valves);
- (2) enclosures (e.g., fencing, etc.);
- (3) guards and their duties, day and night;
- (4) lighting;
- (5) valve and pump locks; and
- (6) pipeline connection caps.

The SPCC Plan contains similar information. Duplicate information may be photocopied and inserted in this section.

2.0 ____ Response Plan Cover Sheet

A three-page form has been developed to be completed and submitted to the RA by owners or operators who are required to prepare and submit a facility-specific response plan. The cover sheet (Attachment F-1) must accompany the response plan to provide the Agency with basic information concerning the facility. This section will describe the Response Plan Cover Sheet and provide instructions for its completion.

2.1 ____ General Information

Owner/Operator of Facility: Enter the name of the owner of the facility (if the owner is the operator). Enter the operator of the facility if otherwise. If the owner/operator of the facility is a corporation, enter the name of the facility's principal corporate executive. Enter as much of the name as will fit in each section.

- (1) *Facility Name:* Enter the proper name of the facility.
- (2) *Facility Address:* Enter the street address, city, State, and zip code.
- (3) *Facility Phone Number:* Enter the phone number of the facility.
- (4) *Latitude and Longitude:* Enter the facility latitude and longitude in degrees, minutes, and seconds.
- (5) *Dun and Bradstreet Number:* Enter the facility's Dun and Bradstreet number if available (this information may be obtained from public library resources).
- (6) *North American Industrial Classification System (NAICS) Code:* Enter the facility's NAICS code as determined by the Office of Management and Budget (this information may be obtained from public library resources.)
- (7) *Largest Oil Storage Tank Capacity:* Enter the capacity in GALLONS of the largest aboveground oil storage tank at the facility.
- (8) *Maximum Oil Storage Capacity:* Enter the total maximum capacity in GALLONS of all aboveground oil storage tanks at the facility.
- (9) *Number of Oil Storage Tanks:* Enter the number of all aboveground oil storage tanks at the facility.
- (10) *Worst Case Discharge Amount:* Using information from the worksheets in Appendix D, enter the amount of the worst case discharge in GALLONS.
- (11) *Facility Distance to Navigable Waters:* Mark the appropriate line for the nearest distance between an opportunity for discharge (i.e., oil storage tank, piping, or flowline) and a navigable water.

2.2 ____ Applicability of Substantial Harm Criteria

Using the flowchart provided in Attachment C-I to Appendix C to this part, mark the appropriate

answer to each question. Explanations of referenced terms can be found in Appendix C to this part. If a comparable formula to the ones described in Attachment C-III to Appendix C to this part is used to calculate the planning distance, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet.

2.3____ Certification

Complete this block after all other questions have been answered.

3.0____ Acronyms

ACP: Area Contingency Plan

ASTM: American Society of Testing Materials

bbls: Barrels

bpd: Barrels per Day

bph: Barrels per Hour

CHRIS: Chemical Hazards Response Information System

CWA: Clean Water Act

DOI: Department of Interior

DOC: Department of Commerce

DOT: Department of Transportation

EPA: Environmental Protection Agency

FEMA: Federal Emergency Management Agency

FR: Federal Register

gal: Gallons

gpm: Gallons per Minute

HAZMAT: Hazardous Materials

LEPC: Local Emergency Planning Committee

MMS: Minerals Management Service (part of DOI)

NAICS: North American Industrial Classification System

NCP: National Oil and Hazardous Substances Pollution Contingency Plan

NOAA: National Oceanic and Atmospheric Administration (part of DOC)

NRC: National Response Center

NRT: National Response Team

OPA: Oil Pollution Act of 1990

OSC: On-Scene Coordinator

PREP: National Preparedness for Response Exercise Program

RA: Regional Administrator

RCRA: Resource Conservation and Recovery Act

RRC: Regional Response Centers

RRT: Regional Response Team

RSPA: Research and Special Programs Administration

SARA: Superfund Amendments and Reauthorization Act

SERC: State Emergency Response Commission

SDWA: Safe Drinking Water Act of 1986

SI: Surface Impoundment

SPCC: Spill Prevention, Control, and Countermeasures

USCG: United States Coast Guard

4.0 ____ References

CONCAWE. 1982. Methodologies for Hazard Analysis and Risk Assessment in the Petroleum Refining and Storage Industry. Prepared by CONCAWE's Risk Assessment Ad-hoc Group.

U.S. Department of Housing and Urban Development. 1987. Siting of HUD-Assisted Projects Near Hazardous Facilities: Acceptable Separation Distances from Explosive and Flammable Hazards. Prepared by the Office of Environment and Energy, Environmental Planning Division, Department of Housing and Urban Development. Washington, DC.

U.S. DOT, FEMA and U.S. EPA. Handbook of Chemical Hazard Analysis Procedures.

U.S. DOT, FEMA and U.S. EPA. Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances.

The National Response Team. 1987. Hazardous Materials Emergency Planning Guide. Washington, DC.

The National Response Team. 1990. Oil Spill Contingency Planning, National Status: A Report to the President. Washington, DC. U.S. Government Printing Office.

Offshore Inspection and Enforcement Division. 1988. Minerals Management Service, Offshore Inspection Program: National Potential Incident of Noncompliance (PINC) List. Reston, VA.

*Attachments to Appendix F**Attachment F-1-Response Plan Cover Sheet*

This cover sheet will provide EPA with basic information concerning the facility. It must accompany a submitted facility response plan. Explanations and detailed instructions can be found in Appendix F. Please type or write legibly in blue or black ink. Public reporting burden for the collection of this information is estimated to vary from 1 hour to 270 hours per response in the first year, with an average of 5 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate of this information, including suggestions for reducing this burden to: Chief, Information Policy Branch, Mail Code: PM-2822, U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington D.C. 20503.

General Information

Owner/Operator of Facility:

Facility Name:

Facility Address (street address or route):

City, State, and U.S. Zip Code:

Facility Phone No.:

Latitude (Degrees: North):

degrees, minutes, seconds

Dun & Bradstreet Number: 1

These numbers may be obtained from public library resources.

Largest Aboveground Oil Storage Tank Capacity (Gallons):

Number of Aboveground Oil Storage Tanks:

Longitude (Degrees: West):

degrees, minutes, seconds North American Industrial Classification System (NAICS) Code: 1
Maximum Oil Storage Capacity (Gallons): Worst Case Oil Discharge Amount (Gallons): Facility
Distance to Navigable Water. Mark the appropriate line.

0- 1/4 mile __ 1/4- 1/2 mile __ 1/2-1 mile __ >1 mile __

Applicability of Substantial Harm Criteria

Does the facility transfer oil over-water ² to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

²Explanations of the above-referenced terms can be found in Appendix C to this part. If a comparable formula to the ones contained in Attachment C-III is used to establish the appropriate distance to fish and wildlife and sensitive environments or public drinking water intakes, documentation of the reliability and analytical soundness of the formula must be attached to this form.

Yes No

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and, within any storage area, does the facility lack secondary containment ² that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation?

Yes No

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance ² (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? ³

³For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 13, for availability) and the applicable ACP.

Yes No Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance ² (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake? ² Yes No

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill ² in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes No

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete.

APPENDIX B

SPILL NOTIFICATION CONTACT LIST AND NOTIFICATION FORM

SPILL NOTIFICATION CONTACTS		SPILL NOTIFICATION INFORMATION
Project Manager Harold Roberts	303-389-4160	Facility Name and Address: USA Tony M Mine South Half of Section 16 and the Northeast Quarter, Township 35 South, Range 11 East, Garfield County, Utah 84726
General Mine Superintendent Mine Compliance Technician Jim Fisher Danny Flannery	970-677-2702 435-979-289	Name of Person Reporting Spill: Description of Incident and Amount Spilled: Cause of Spill (include reason for failure):
DUSA management may contact the following State/Federal Agencies, as necessary National Response Center : 1-800-424-8802 Utah DEQ: 1-801-536-4123 Local Emergency Fire Department: 1-435-599-3131		Corrective Actions/Countermeasures (include description of equipment repairs and/or replacements):

**APPENDIX C
PHOTOGRAPHS**

Photo: 1

Description:

View of Shitamaring
Creek adjacent to the mine
site, facing south.



Photo: 2

Description:

View of Shitamaring
Creek adjacent to mine
site, facing north.



Photo: 3

Description:
View of mine site facing
north.



Photo: 4

Description:
Mine veportals, facing
northwest.



Photo: 14

Description:
Proposed mine facilities
Area, facing south.



Photo: 1

Description:
View of the control
building.

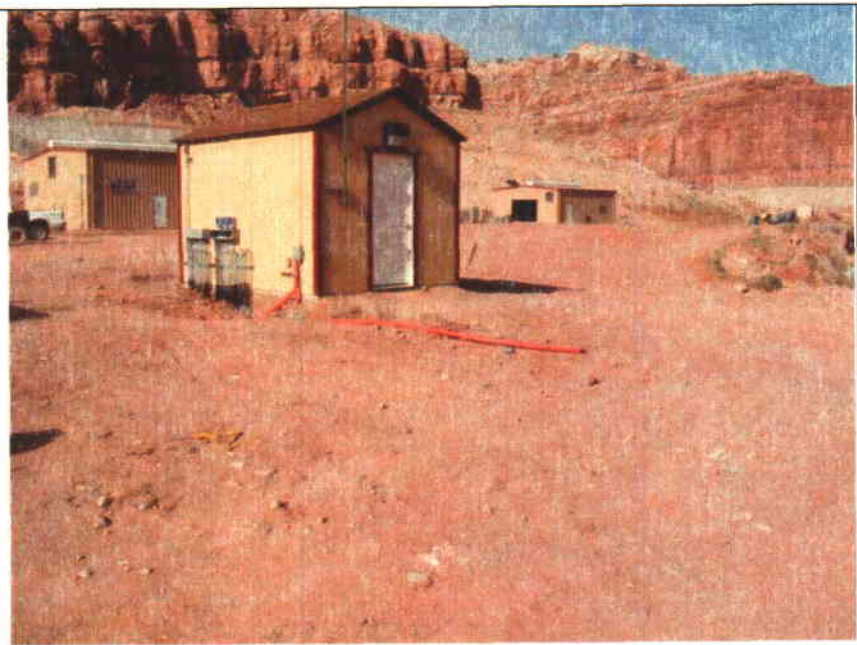


Photo: 2

Description:
View of the control
building.



Photo: 3

Description:
View of ASTs #4 and #5,
two 850-gallon diesel fuel
day tanks located directly
behind the generator
station on a concrete pad.



Photo: 4

Description:
View of ASTs #4 and #5,
two 850-gallon diesel fuel
tanks located directly
behind the generator
station on a concrete pad.



Photo: 5

Description:
View of AST #1, a 500-
gallon AST containing
unleaded gasoline and
ASTs #2 and #3, two
5,000-gallon ASTs
containing diesel fuel;
located in the bulk fuel
storage area.

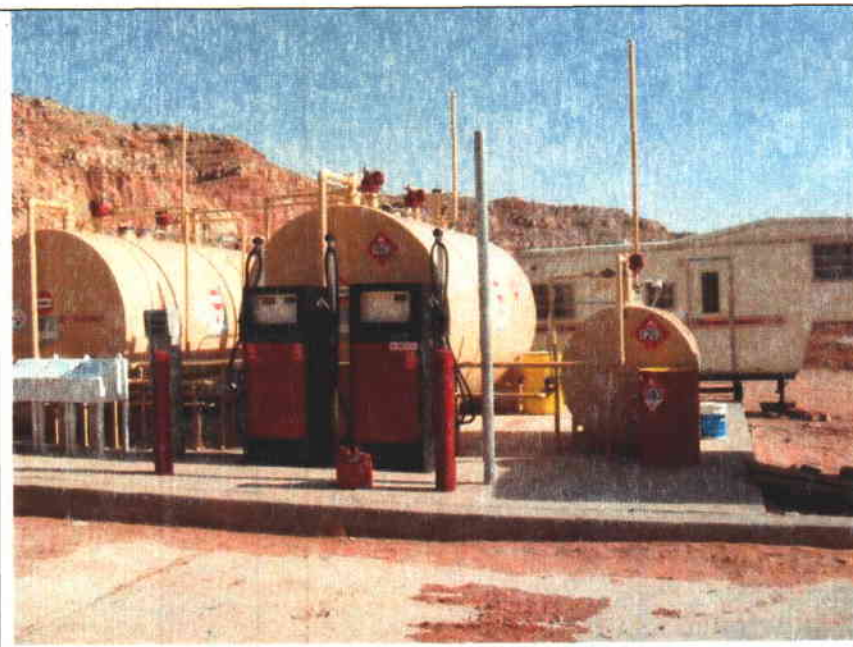


Photo: 6

Description:
View of AST #2, 5,000-gallon ASTs containing diesel fuel; located in the bulk fuel storage area.



Photo: 7

Description:
View of ASTs #2 and #3, two 5,000-gallon ASTs containing diesel fuel; located in the bulk fuel storage area.

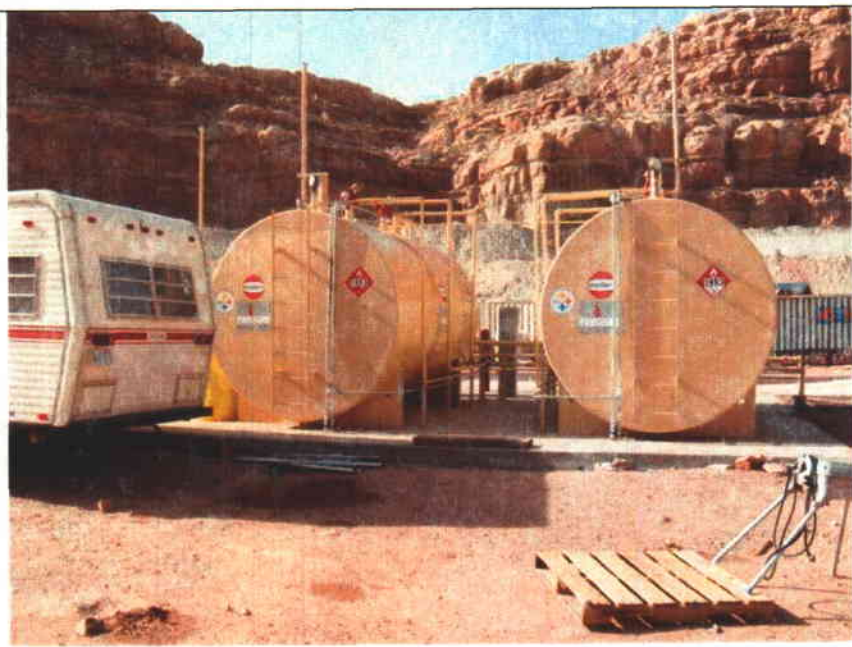


Photo: 8

Description:
View of AST #1, a 500-gallon AST containing unleaded gasoline and ASTs #2 and #3, two 5,000-gallon ASTs containing diesel fuel; located in the bulk fuel storage area.

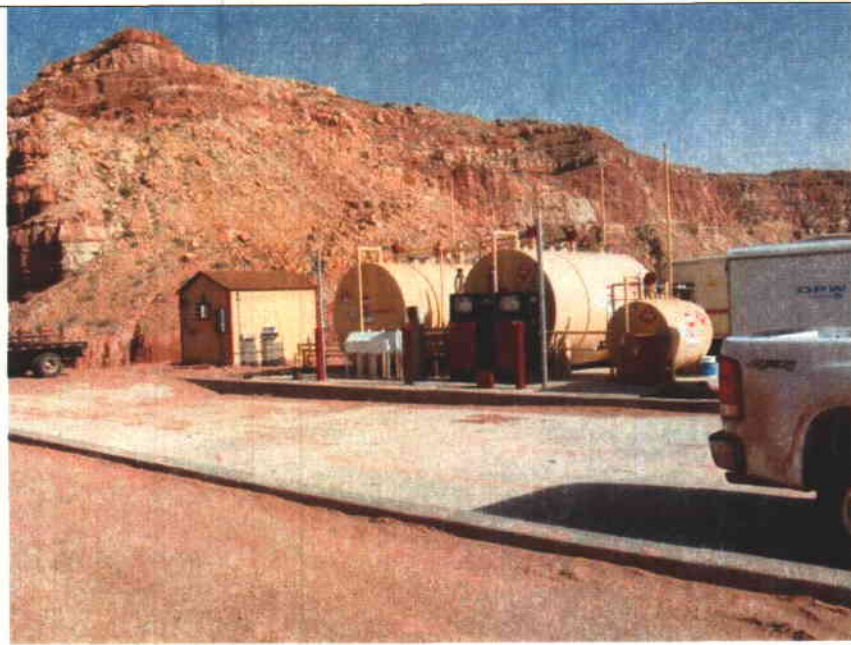
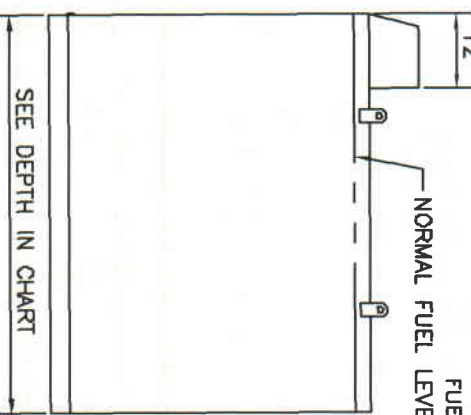
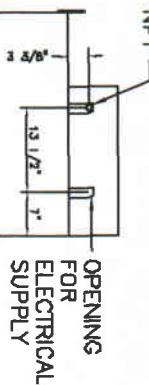


Photo: 9

Description:
View of AST #7 a 110 gallon tank that travels with the mobile 230 kW generator.



APPENDIX D
TANK INFORMATION



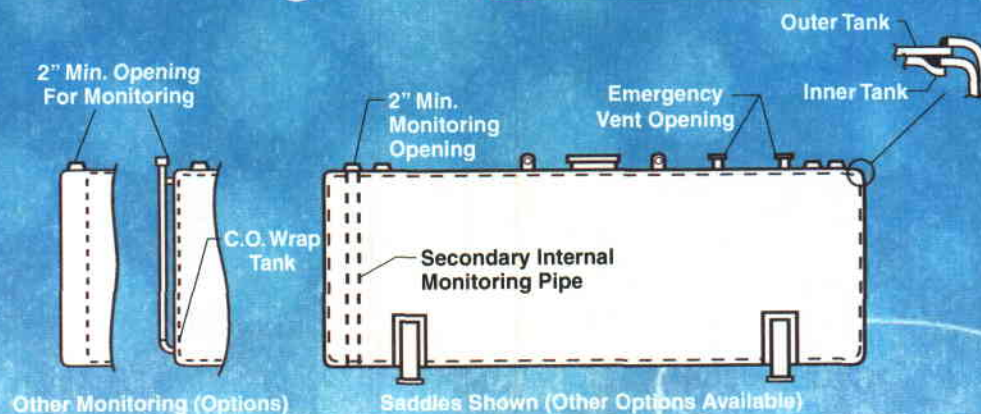
SECONDARY CONTAINMENT 07700ULD		
	REMOVED OUTER TANK NORMAL VENT	TMP
2	3-03	
1	5-00	CHANGED MODEL NAMES
REV	DATE	DESCRIPTION
		BY
		800ULD, 900ULD, 1000ULD
		03413

E & C A

FILE MH 15287
WHEN SPECIFIED



Horizontal Aboveground Double Wall Storage Tank



APPROX. CAPACITY (GALLONS)	NOM. DIAMETER	NOM. LENGTH
300	38"	6'-0"
560	48"	6'-0"
1,000	64"	6'-0"
2,000	64"	12'-0"
3,000	64"	18'-0"
4,000	64"	24'-0"
4,000	96"	10'-8"
6,000	96"	16'-0"
8,000	96"	21'-4"
10,000	96"	26'-9"
12,000	96"	32'-0"
10,000	120"	17'-0"
12,000	120"	20'-6"
15,000	120"	25'-6"
20,000	120"	34'-6"
25,000	120"	42'-9"
30,000	126"	46'-6"
25,000	126"	38'-10"
40,000	144"	47'-4"
50,000	144"	59'-4"

Tank lengths listed above are based on nominal inner tank dimensions.
Overall tank lengths will vary during actual manufacturing.

STANDARD SPECIFICATIONS

- Built per Underwriters Laboratories UL 142 standard for double wall design.
- Exclusive free flowing design.
- Modern's standard opening locations and required lifting lugs.
- Exterior coated with one (1) coat of standard shop primer and not blast cleaned.
- Check with Modern for type of Emergency Vent Openings supplied.
- Support may be two (2) saddles, stabilizers, or skid configuration.
- Other exterior and interior coating systems available upon request.
- Other tank sizes available upon request.

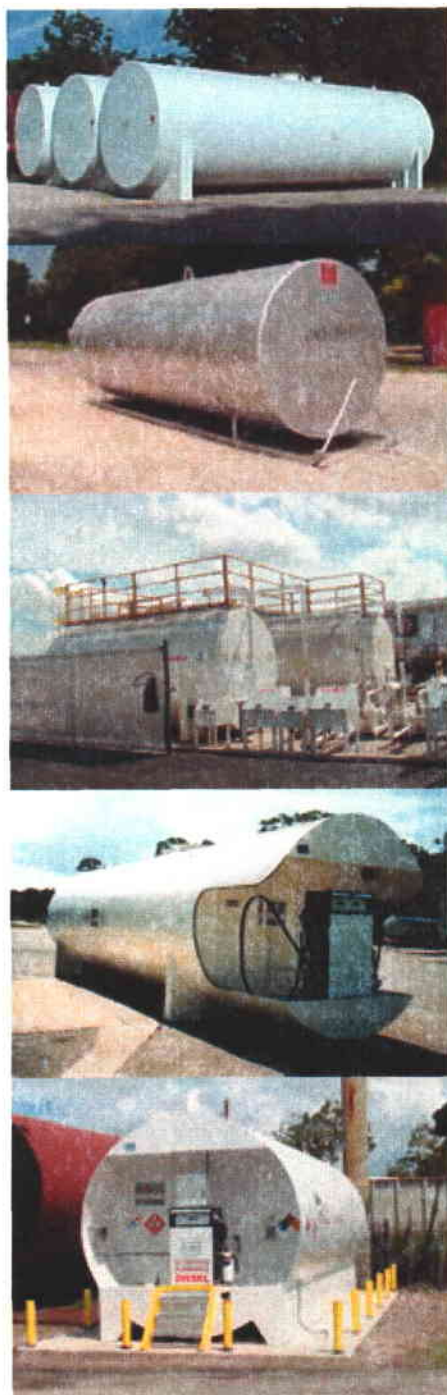


MODERN WELDING CO., INC.



Modern Welding Company

Subsidiaries Nationwide
Fabricator of Quality Metal Products offering Coast to Coast Service
www.modweldco.com



Aboveground Horizontal Storage Tanks

- 300 to 50,000 gallon capacity
- Material of construction maybe carbon or stainless steel
- Underwriters Laboratories Construction, UL-142
- Single or double wall steel configurations available
- Also available in rectangular constructions up to 24,000 gallons
- Available with multiple compartments for multiple fuel storage
- Compatible with gasoline, diesel, fuel oil, ethanol, methanol and additives
- Lined internally for special applications, such as jet fuel or potable water storage
- Tanks maybe supported on stationary saddles, anti-roll stabilizers or structural skid configurations
- Tanks available with pump platforms and accessories
- Fuel dispensing equipment available

Horizontal Configurations: These are steel atmospheric tanks intended for aboveground storage of non-corrosive, stable, flammable, and combustible liquids that have a specific gravity not exceeding that of water. Maximum allowable working pressure is 0.5 psig as measured from top of tank.

Tanks can be furnished with stationary support saddles, anti roll supports or structural skids. Only new steel materials are used in tank constructions. Each tank is sized with the appropriate normal and emergency vent openings as defined in the tank's standard of construction. Horizontal tanks maybe single or double wall construction. If the tank is a double wall configuration, then it has interstitial monitoring capabilities. Tanks may also be built with or without multiple compartments for multiple fuel storage. Tanks are built to Underwriters Laboratories specifications.

Modern Welding Company, a nationwide metal fabricator offering regional service and delivery. Contact our subsidiary closest to your project for regional pricing and freight savings.				
Locations:	Newark, OH modern5@modweldco.com 740-344-9425	Houston, TX modern7@modweldco.com 713-675-4211	Fresno, CA modern10@modweldco.com 559-275-9353	Rhome, TX modern15@modweldco.com 817-636-2215
	Owensboro, KY modern1@modweldco.com 270-683-5323	Orlando, FL modern6@modweldco.com 407-843-1270	Burlington, IA modern8@modweldco.com 319-754-6577	Augusta, GA modern14@modweldco.com 706-722-3411
Modern Custom Fabrication, Fresno, CA modern16@modweldco.com 559-264-4741				

SECONDARY CONTAINMENT AUTOMATIC DAY TANKS

STANDARD FEATURES

Construction

- Built and labeled per UL-142 specifications
- Heavy gauge steel lap joint construction
- Heavy duty steel cover w/ window
- 6 1/2" square removable inspection plate
- 4 - 1" NPT connections; fuel outlet, fuel return, alternate fuel return, and overflow.
- 2 - 1 1/4" NPT normal vent connection
- 2 - Emergency vent connection - size specified by UL-142
- 3/8" NPT tank drain connection

Electrical

- Heavy duty 1/3 HP, 115 VAC, 1 P, 60 Hz. motor
- Heavy duty float switch
- "Press to test" switch
- "Pump-running" indicator light
- Hard wired control wiring
- Socketed, replaceable relays

Mechanical

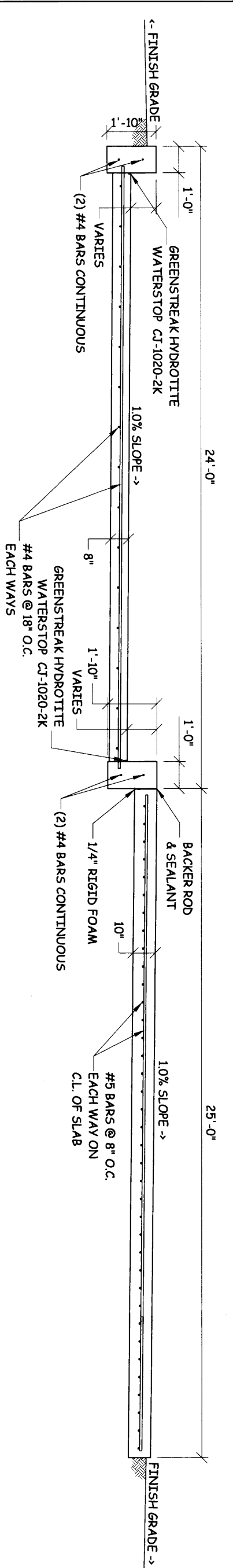
- 2 GPM bronze high lift gear pump w/ stainless steel shafts
- 1 1/2" NPT mechanical fuel level gauge
- All plumbing pre-connected

Finish

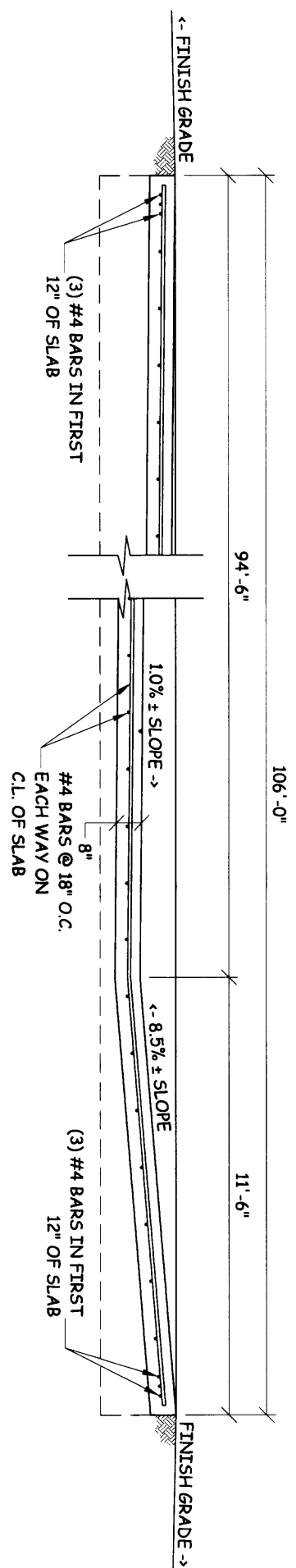
- Interior - epoxy coated
- Exterior - E&CA gray enamel



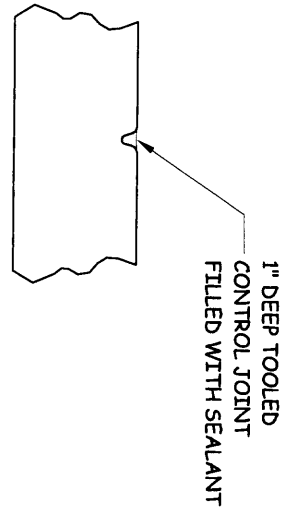
MODEL	CAPACITY		WIDTH		HEIGHT		DEPTH		WEIGHT		EMERG VENT	LIST PRICE
	GAL	LIT	IN	CM	IN	CM	IN	CM	LB	KG	NPT	
SCDT25ULD	25	95	24	61	33	83.8	20	51	173	79	2	3,410.00
SCDT50ULD	50	189	24	61	43	109.2	24	61	329	150	2	3,599.00
SCDT60ULD	60	228	24	61	49	124.5	24	61	364	165	2	3,815.00
SCDT75ULD	75	284	24	61	59.5	151.1	24	61	419	190	3	4,114.00
SCDT100ULD	100	379	24	61	59.5	151.1	31	78.7	486	221	3	4,802.00
SCDT150ULD	150	570	24	61	59.5	151.1	42	106.7	592	269	3	5,854.00
SCDT200ULD	200	758	24	61	59.5	151.1	56	142.2	721	327	4	7,314.00
SCDT275ULD	275	1041	30	76.2	59.5	151.1	60	152.4	830	376	4	8,419.00
SCDT300ULD	300	1140	30	76.2	59.5	151.1	64	162.6	871	395	4	8,945.00
SCDT325ULD	325	1230	30	76.2	59.5	151.1	69	175.3	922	418	4	9,208.00
SCDT350ULD	350	1325	30	76.2	59.5	151.1	74	188	973	441	4	9,550.00
SCDT400ULD	400	1520	36	91.5	59.5	151.1	70	178	1008	458	4	10,103.00
SCDT450ULD	450	1710	36	91.5	59.5	151.1	78	198	1094	497	4	10,629.00
SCDT500ULD	500	1900	42	106.7	59.5	151.1	74	188	1129	513	4	11,313.00
SCDT550ULD	550	2090	48	122	59.5	151.1	72	183	1176	535	5	12,234.00
SCDT600ULD	600	2280	48	122	59.5	151.1	78	198	1248	567	5	12,852.00
SCDT700ULD	700	2660	48	122	59.5	151.1	74	188	1689	766	6	13,800.00
SCDT800ULD	800	3040	48	122	59.5	151.1	84	213.4	1854	841	6	15,567.00
SCDT900ULD	900	3420	48	122	59.5	151.1	92	233.7	1986	901	6	16,501.00
SCDT1000ULD	1000	3800	48	122	59.5	151.1	108	274.3	2249	1020	6	17,115.00



A FUEL STATION SECTION



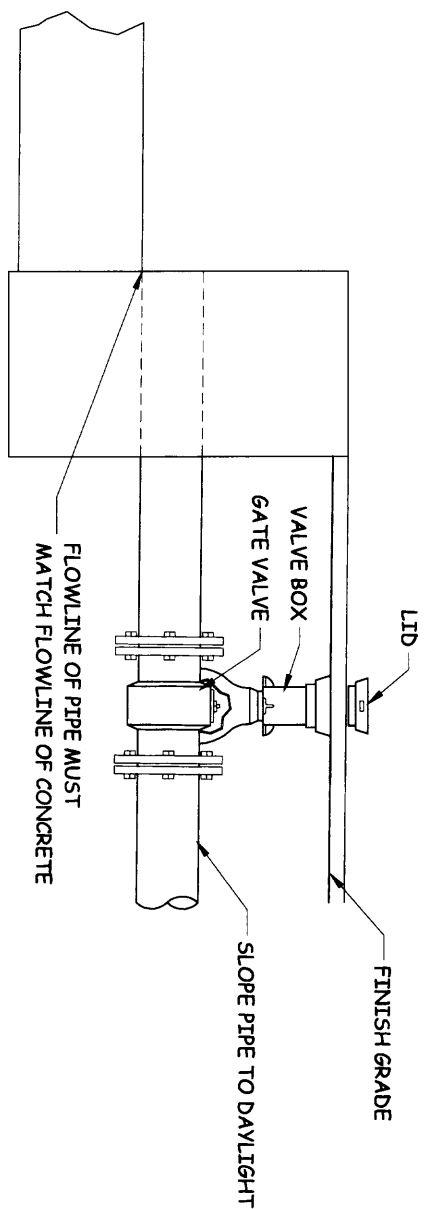
B FUEL STATION SECTION



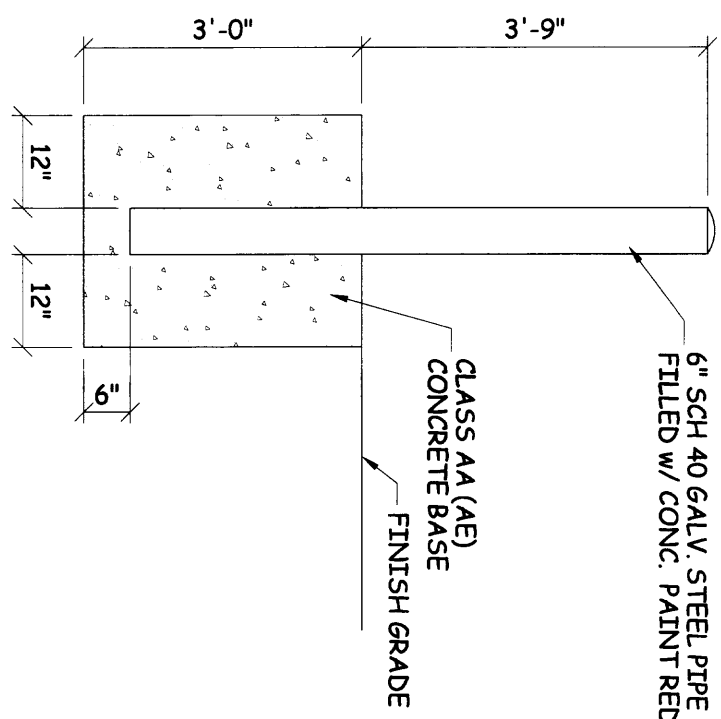
C CONTROL JOINT

NOTE:


1. IF THIS IS A COLD JOINT INSIDE THE CONTAINMENT AREA, USE GREENSTREAK HYDROLITE WATERSTOP.



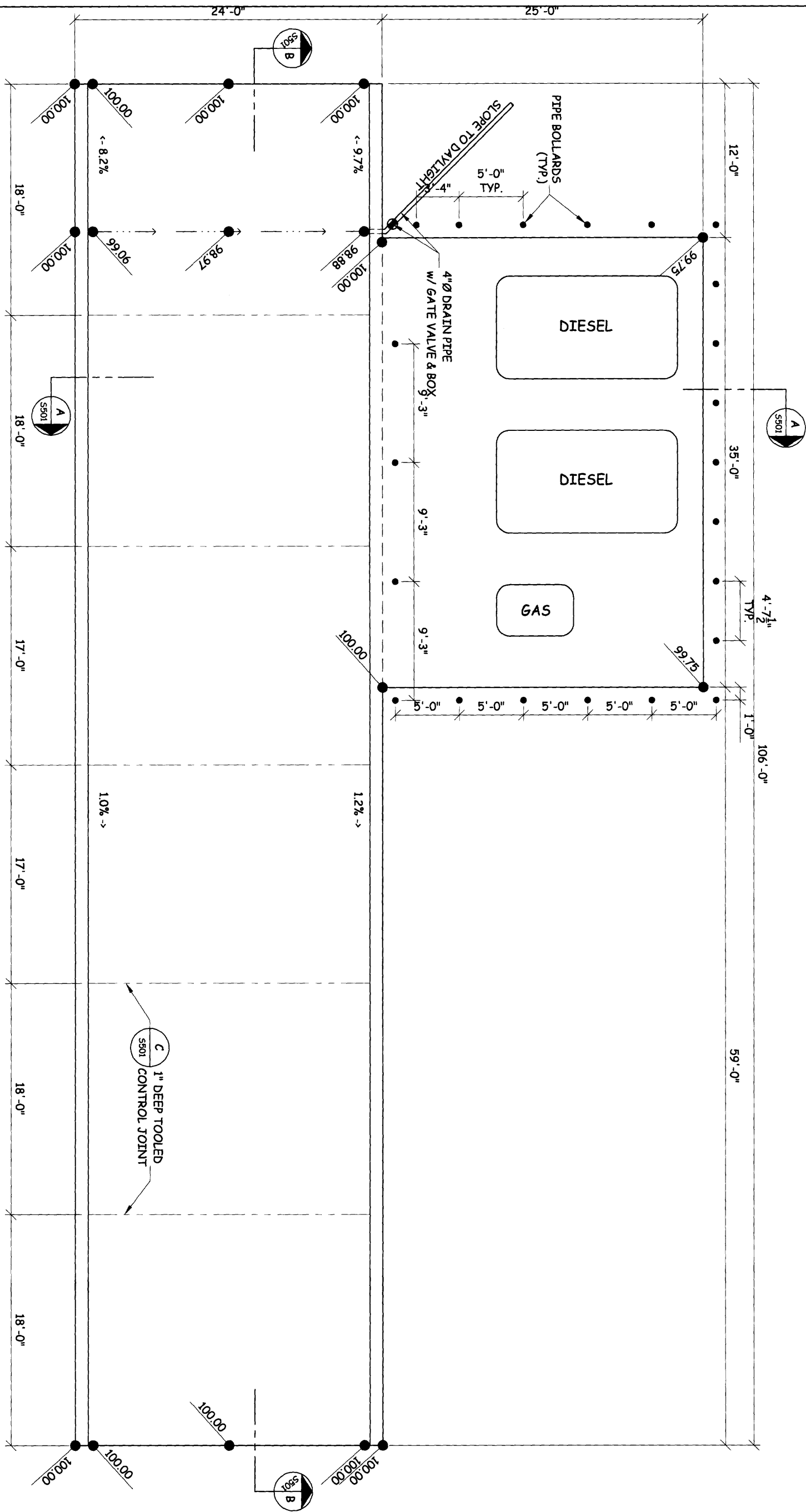
D DRAIN PIPE & VALVE DETAIL




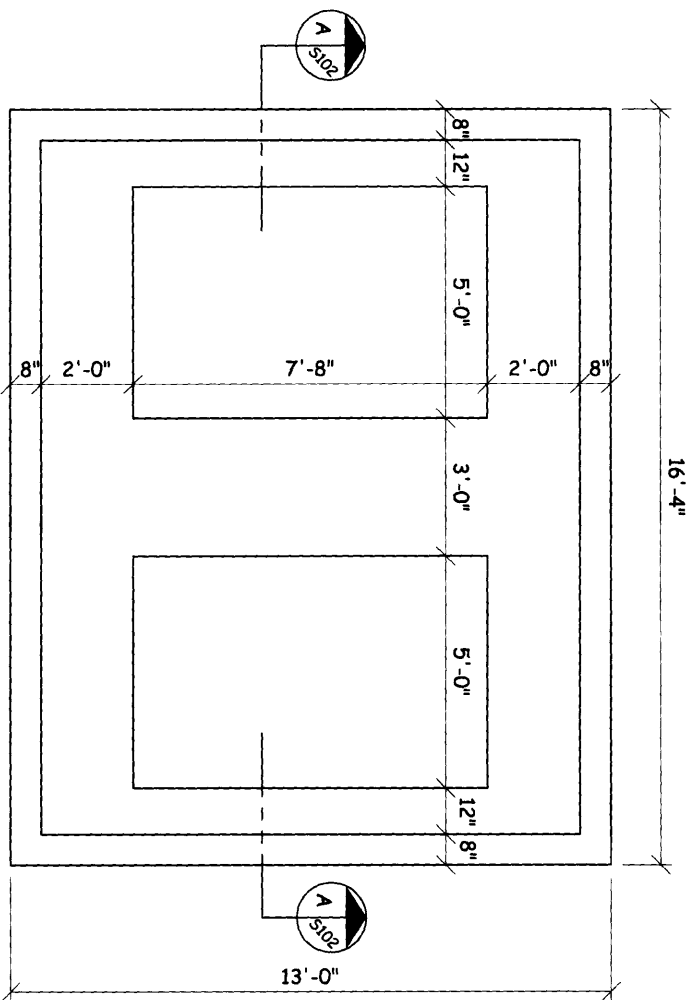
E PIPE BOLLARD DETAIL

SHEET NO. S501	GARFIELD COUNTY	DENISON MINES		<div></div> <div>Jones & DeMille Engineering</div> <div>1535 South 100 West Richfield, Utah 84701</div> <div>Phone: (435) 896-8200 Fax: (435) 896-8208</div> <div>www.jonesanddemille.com</div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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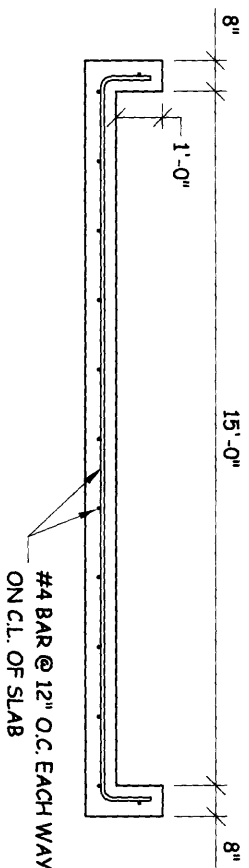
FUEL STATION PLAN




SHEET NO. S101	GARFIELD COUNTY	DENISON MINES		<div></div> <div>Jones & DeMille Engineering</div> <div>1535 South 100 West Richfield, Utah 84701</div> <div>Phone (435) 896-8298 Fax (435) 896-4208</div> <div>www.jonesanddemille.com</div>								
		FUEL STATION										
		FOUNDATION PLAN		APPROVAL RECOMM.:	DESIGN: RJ 11-07	CHECK: -	REVIEW	NO. DATE DESIGN REV. BY MAPS CORR. BY PARCELS REQUEST BY		REMARKS		
				DATE PROJECT DESIGN ENGINEER	DRAWN: TRB 11-07	CHECK: RJ 11-07	DATE -	ORIGINAL SUBMISSION FOR AUTHORIZATION				
		PROJECT NUMBER: 0701-075		APPROVED:	QUANT: TRB 11-07	CHECK: RJ 11-07	BY: -	REVISIONS				
				DATE				SCALE: VARIES	DWG NAME: F-DETAILS	DWG CREATED: CR_DATE	LAST UPDATE: 1/14/2008	
							SHT SET: FUEL STATION	PEN TBL: pdfwriter.ctb				



FUEL STATION PLAN



FUEL STATION SECTION

SHEET NO. S102	GARFIELD COUNTY	DENISON MINES		 Jones & DeMille Engineering 1535 South 100 West Richfield Utah 84701 Phone (435) 896-8206 Fax (435) 896-8208 www.jonesanddemille.com										
		FUEL STATION												
		FUEL TANK PAD DETAIL		APPROVAL RECOMM. DATE PROJECT DESIGN ENGINEER	DESIGN: RJ 11-07	CHECK:	REVIEW	NO.	DATE	DESIGN REV. BY	MAPS CORR. BY	PARCELS AFFECTED	REQUEST BY	REMARKS
				APPROVED: DATE	DRAWN: TRB 11-07	CHECK: RJ 11-07	DATE:	ORIGINAL SUBMISSION FOR AUTHORIZATION						
		PROJECT NUMBER: 0701-075			QUANT: TRB 11-07	CHECK: RJ 11-07	BY:	REVISIONS						
									SCALE: 1/4"=1'	DWG NAME: F-DETAILS		DWG CREATED: CR_DATE		LAST UPDATE: 1/14/2008
							SHT SET: FUEL STATION		PEN TBL: pdfwriter.ctb					

APPENDIX E

**TANK ULLAGE/FUELING LOG AND FUEL UNLOADING
PROCEDURE CHECKLIST**

APPENDIX E-1

TANK ULLAGE AND FUELING LOG

Tank Capacity _____ **gallons**

[illegible]

Note:

- a From gauge reading
b Available capacity = tank capacity – initial volume of fuel in tank

APPENDIX E-2 **FUEL UNLOADING PROCEDURE CHECKLIST**

Date: _____ Tank: _____

NWS Representative: _____ Supplier: _____

✓	ITEM	DESCRIPTION	Comment
The following six items must be completed prior to fuel unloading:			
	1	Check the outfall of the temporary sediment basin. Ensure that spill materials are in place to prevent spills from leaving the temporary sediment basin.	
	2	Ensure the audible high level alarm system is function properly.	
	3	Determine the available capacity (ullage) of the tank by converting the reading on the fuel gauge to gallons (See Appendix A, Page A-1 in SPCC plan). This ullage should then be marked in the fueling log communicated to the tank truck unloading contractor.	
	4	Block the wheels of the tank truck.	
	5	Drip pans should be placed under all pump hose fittings (if applicable) after the hose is hooked up to the tank and prior to unloading.	
	6	Ensure the fill nozzle is in place in the appropriate tank appurtenance.	
During unloading			
	7	Ensure that a IDUSA representative and the tank truck operator remain with the vehicle at all times during unloading.	
	8	Monitor the gauges on the tank and the truck continuously to ensure the ullage is not exceeded. If the audible high-level alarm sounds, the unloading of fuel is stopped as soon as possible.	
After fuel unloading is completed			
	9	Record the amount of fuel unloaded in the log (Appendix A, Page A-1).	
	10	Prior to removing the fill hose from the tank, ensure that it is drained and that all drain valves are closed (if applicable).	
	11	Any fuel in the drip pans or spill container on the fill pipe should be poured into the tank (if it has the capacity) or disposed of appropriately (describe how it was disposed of, if applicable)	
	12	Inspect the tank truck prior to removing the blocks to ensure the lines have been disconnected from the tank.	
	13	Remove the blocks from tank truck wheels.	
	14	Return the temporary sediment basin outlet to its original condition.	
	15	Place a copy of this fuel unloading checklist in the SPCC plan.	

APPENDIX F
INSPECTION CHECKLISTS

MONTHLY INSPECTION CHECKLIST (Page 1 of 2)				
Date of Inspection:	Tank Name or No.:			
Date of Last Inspection:	Inspected by:			
	Signature:			
A. TANKS		YES	NO	NOTES
1. Are there any oil stains on the outside of the tank, including the underside?				
2. Is there any oil on the ground, concrete, or asphalt around the tank?				
3. Are there any visible cracks or indications of corrosion on the tank, at fittings, joints, or seals? (such as paint peeling or rust spots)				
4. Are there any raised spots, dents, or cracks on the tank?				
5. Does it appear that the foundation has shifted or settled?				
6. Is the fuel gauge working properly?				
7. Are all vents clear so they may properly operate?				
8. If rainwater is present in secondary containment area, does sufficient volume remain for spill control? (if applicable)				

MONTHLY INSPECTION CHECKLIST (Page 2 of 2)			
Date of Inspection:	Tank Name or No.:		
Date of Last Inspection:	Inspected by:		
	Signature:		
B. PIPING		YES	NO
1. Is there any oil on the outside of or under any aboveground piping, hoses, fittings, or valves?			
2. Are aboveground piping, hoses, fittings, or valves in good working condition?			
C. SECURITY/SAFETY/SPILL COUNTERMEASURES			
1. Are lights working properly to detect a spill at night?			
2. Are all locks in the "lock" position?			
3. Are all warning signs properly posted and readable?			
4. Are vehicle guard posts in place and properly secured? <i>(If applicable)</i>			
5. Are spill kits easily accessible, protected from the weather, and complete?			
Corrective Actions Required:			

ANNUAL INSPECTION CHECKLIST (Page 1 of 1)				
Date of Inspection:	Tank Name or No.:			
Date of Last Inspection:	Inspected by:			
	Signature:			
		YES	NO	NOTES
A. MONTHLY CHECKLIST				
1. Has monthly inspection checklist been completed?				
B. TANKS				
1. Are all alarms and automatic shutoff devices working properly?				
C. OTHER				
1.				
2.				
Corrective Actions Required:				

APPENDIX G

INTEGRITY TESTING DOCUMENTATION AND SCHEDULE

AST #	Install Date	1 st Test Date	2 nd Test Date	3 rd Test Date
1				
2				
3				
4				
5				
6				
7				

*Integrity testing occurs every 10 years.

APPENDIX H

**TRAINING OUTLINE AND COPY OF TITLE 40 OF
THE CODE OF FEDERAL REGULATIONS
SECTION 112-OIL POLLUTION PREVENTION**

APPENDIX H-1

OUTLINE FOR SPILL PREVENTION, CONTROL, AND COUNTERMEASURE TRAINING

Training will be provided for facility personnel at the following times:

1. System start up or whenever new equipment is installed
2. Within the first week of employment for new personnel
3. Annually

The training will include complete instruction in the elements of the facility's Spill Prevention, Control, and Countermeasure plan and will include the following:

1. Pollution control laws, rules, and regulations including a summary of Title 40 of the Code of Federal Regulations Part 112 "Oil Pollution Prevention" (see Attachment).
- B. Fuel Storage System
 1. Purpose and application of the following system elements:
 - a. Tanks
 - b. Piping
 - c. Pumps
 - d. Accessory equipment
 1. Electronic monitors
 2. Operation, maintenance, and inspection of system elements
- C. Spill Prevention
 - a. Potential spill sources
 - b. Spill flow direction and impact on navigable waters
 - c. Procedures to prevent spills, especially during fuel unloading
- D. Spill Control
 1. Secondary containment
 2. Safety valves
 3. Pump and equipment shutoff switches
 4. Use of catch basin inlet covers or other diversionary devices
- E. Spill Countermeasures
 1. Location and use of emergency phone numbers
 2. Location and use of fire extinguishers
 3. Location and use of spill cleanup kit
 4. Stopping the leak

APPENDIX H-2

**TITLE 40 OF THE CODE OF FEDERAL REGULATIONS SECTION 112
OIL POLLUTION PREVENTION
(26 Pages)**

APPENDIX I

CROSS REFERENCE OF THE REQUIREMENTS OF TITLE 40 OF THE CODE OF FEDERAL REGULATIONS, SECTION 112.7, WITH THIS DOCUMENT

<u><i>Requirement</i></u>	<u><i>Location within Plan</i></u>
Facility Description – 40 CFR 112.7(a)(3)	Part I.B
Discharge Prevention Measures – 40 CFR 112.7(a)(3)(ii and iii)	Part II.A.1.0
Countermeasures – 40 CFR 112.7(a)(3)(iv and v)	Part III.A
Contact List – 40 CFR 112.7(a)(3)(vi)	Appendix A
Emergency Response Procedures – 40 CFR 112.7(a)(4)	Part III.A
Potential Equipment Failures - 40 CFR 112.7(b)	Part I.B.5, Table 2
Containment and Diversionary Structures - 40 CFR 112.7(c)(1)	Part B.1
Demonstration of Impracticability - 40 CFR 112.7(d)	Part II.A.3, Appendix F
Inspections, Tests, and Records – 40 CFR 112.7(e)	Part II.A.3, Appendix E
Personnel, Training, and Discharge Prevention Procedures – CFR 112.7(f)	Part II.A.5, Appendix G, Part II.A.1
Security – 40 CFR 112.7(g)	Part II.A.4
Facility Tank Car and Tank Truck Loading/Unloading Rack – 40 CFR 112.7(h)	Part II.A.2, Appendix D
Field Constructed Tanks – 40 CFR 112.7(i)	Not applicable – Tank(s) on-site is/are shop fabricated.
State-Specific Requirements – 40 CFR 112.7(j)	Part III.C
Facility Drainage – 40 CFR 112.8(b)	Part I.3
Bulk Storage Tanks - 40 CFR 112.8(c)	Part I.B.3, Part II.A.1, Part II.B.1
Facility Transfer Operations, Pumping, and Facility Process – 40 CFR 112.8(d)	Part II.A
Certification of the Applicability of the Substantial Harm Criteria Checklist – 40 CFR 112.20	Appendix H

**APPENDIX J
SPILL REPORTING FORM**

1. GENERAL		
Name of Facility: IDUSA Tony M Mine	Address: South Half of Section 16 and the Northeast Quarter, Township 35 South, Range 11 East, Garfield County, Utah 84726	
Completed By:	Organization: IDUSA	
Position:	Phone:	
2. SPILL INFORMATION		
Date:	Time:	
Location at Facility:	Quantity:	
Substance Spilled: Diesel Fuel or Battery Acid	Other:	
3. OUTSIDE NOTIFICATIONS:		
Agencies	Recorder at Outside Agency	Date and Time
Call 9-1-1 (or the local emergency agency), if there is an immediate emergency		
IDUSA: Facility Contact: Jim Fisher General Mine Superintendent (970) 677-2702 Danny Flannery Mine Compliance Technician (970) 979 -2897 Harold Roberts, Project Manager (303) 389-4160		
EPA National Response Center and U.S. Coast Guard: (800) 424-8802 (Manager, Environmental Compliance makes determination)		
Utah Department of Environmental Quality: (801) 536-4123		
4. INFORMATION ON SOURCE AND CAUSE		
5. DESCRIPTION OF ENVIRONMENTAL DAMAGE		
6. CLEANUP ACTION(S) TAKEN		
7. CORRECTIVE ACTION(S) TO PREVENT FUTURE SPILLS		

Note: All information must be filled in. If something is unknown, write "unknown."

Copies must be sent to the NWS/NOAA personnel listed above.